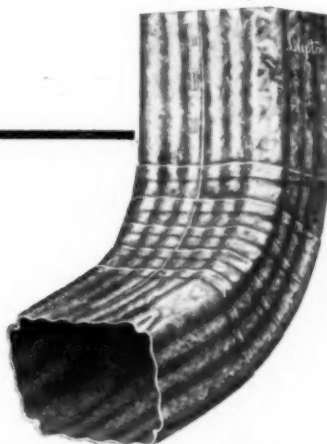


# AMERICAN ARTISAN and Hardware Record

VOL. 85. No. 2. 620 SOUTH MICHIGAN AVENUE, CHICAGO, JANUARY 13, 1923. \$2.00 Per Year.



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Allegheny Avenue and Tulip Street

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An unusually profitable proposition is waiting for you in our agency for 1923.

## The Forest City Foundry and Manufacturing Co.

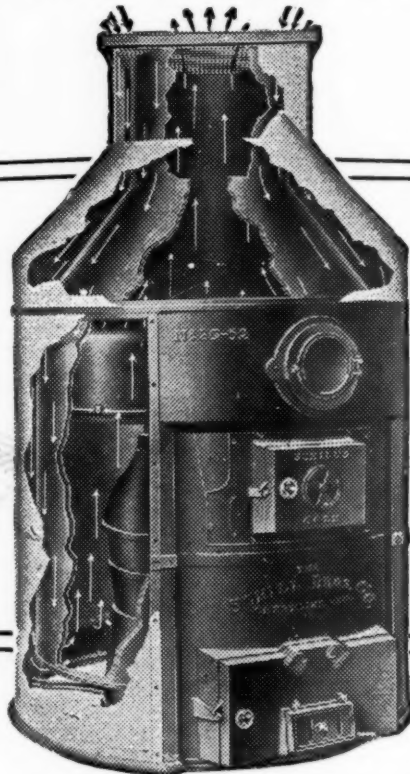
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Schill quality  
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cup jointed  
heater.*

*Perfectly  
designed cold  
and warm  
air chambers.*

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**L**ET us start now to cooperate with you in selling this high quality pipeless furnace.

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and illustrated catalog—now*

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CRESTLINE, OHIO

Founded 1880 by Daniel Stern

Thoroughly Covers  
the Hardware, Stove,  
Sheet Metal, and  
Warm Air Heating and  
Ventilating Interests

# AMERICAN ARTISAN and Hardware Record

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VOL. 85. No. 2.

CHICAGO, JANUARY 13, 1923.

\$2.00 Per Year.

## GO AFTER BUSINESS HARD AND YOU WILL GET YOUR FULL SHARE

In 1922 the sales of Montgomery Ward and Company amounted to \$92,474,182.00, a gain of \$16,517,533.00 or 21.75 per cent over their business of 1921.

The greatest months in point of sales were March and June with over 8½ millions, October with over 10 millions, November with over 11 millions and December with nearly twelve.

From the standpoint of percentage of increased sales December was the heaviest—56.62; November—45; October—35; June—27. January showed a decrease in sales of \$127,000.00, or 2¼ per cent below sales for January, 1921.

The really important conclusion which may be drawn from the statement of this mail order house is not so much the fact that it gained over 1921—any efficiently operated general retail business would show a gain—but the fact that as soon as the farmers had harvested their grain and corn the sales jumped at a much greater rate than in any other period of the year, and that the gain became greater with every month, October, November and December, showing an increase of over 10 million dollars above the same months of 1921, nearly 45 per cent on an average.

Another important fact stands out—the total sales for 1922 were greater than those of any other year in the history of the company.

Is there special significance in these facts for the rural hardware merchant?

In our opinion there is:

Mail order sales are originated in rural communities—the great majority of them.

Mail order sales were greater for this company than in any other year.

There were two reasons:

1. The farmers had some money.
2. Montgomery Ward and Company went after business probably a little more aggressively and more effectively than some of the others. At any rate they got the business.

Of course, we all know that it takes more bushels of wheat or corn to pay for a range now than it did ten years ago, but many farmers have been going without things so long that they actually must buy now that they have a bit of money—and they have some money.

So we have reason to look for and to work for a reasonably good business this spring. The basic conditions are far better than they were a year ago, although even then they were showing improvement over 1921.

To our mind there is only one important danger and we have pointed this out before:

Some price advances are absolutely necessary and others may be found necessary as time goes on.

But let us guard carefully against a recurrence of what happened in 1919 and the early part of 1920.

There is a point beyond which the consumer simply refuses to go, and when prices get to that point he quits buying.



## Random Notes and Sketches.

By Sidney Arnold

I am always glad to see my good friend, George D. Kirkham, of Chattanooga, Tennessee, who carries the products of the American Steel & Wire Company to the trade in the South. This well known member of the "Old Guard" was a recent visitor to my office, and brought with him a breezy optimism of Southern prosperity. It *does* look like a good year.

\* \* \*

The many messages of felicitation and good cheer which came to this office Christmas and New Year's are a source of profound pleasure to the editorial direction and staff of AMERICAN ARTISAN AND HARDWARE RECORD. And on behalf of the entire staff and management may I take this opportunity and means to thank, individually and severally, the senders of these happy expressions. In this workaday world such exchanges help to encourage and inspire anew, and make for lightened labor the twelve-month ahead.

\* \* \*

"Scrambled eggs," ordered Ralph W. Blanchard, of the Hart & Cooley Company, at a restaurant the last time he was in Milwaukee. "Milk toast," murmured "Buck" Taylor, of the Premier Furnace Company, who was not feeling well.

"Scramble two and a graveyard stew," sang the waitress with the titian hair.

"Here," corrected "Buck," "I want milk toast."

"You'll get it, buddy," replied the girl. "That's what they call milk toast in Pittsburgh, where I worked."

The two travelers held a conference and decided to "put one over," on the "fresh young thing" from Pittsburgh. Ralph wanted a glass of milk and "Buck" a cup of black coffee.

When the girl appeared to put a "set up" of the restaurant artillery

in front the men, "Buck" gave the following order:

"A bottle of lacteal fluid for my friend and a scuttle of Java with no sea foam for me."

"Chalk one an' a dipper of ink," shouted the girl. She didn't even smile.

\* \* \*

H. B. Huffaker, who sells Wise furnace and Pointer ranges in Iowa and Nebraska, wants it distinctly understood that he is not the man who has the speaking part in this domestic dialogue:

He, entering bed room after a prolonged evening's discussion of the evil effects of the Volstead law and how to stop the growing disrespect for authority, is met with the inquiry from his better half, "What time is it?"

His reply: "Just eleven o'clock, m'dear!"

Just then the clock downstairs announced by three distinct cuckoos that his statement was somewhat at variance with the mechanical indicator of time.

She: "You are lying to me, didn't I just hear the clock strike three?"

He: "S'allright, m'dear, but it hurts me very deeply that you take the word of a dollar and a half clock against my word."

\* \* \*

Harvey J. Manny, then whom there is no better when it comes to get things moving in meetings of the Illinois Sheet Metal Auxiliary meetings, contributes the following:

"Do you believe in telepathy, Miss Flappe?" asked the bashful caller across the space that intervened.

"Telepathy? Er—I'm not sure I know what you mean, Mr. Babbitt."

"Why, thought transference, you know."

"Oh. Good gracious, no! If there was anything in it you wouldn't be sitting where you are."

Knowing R. W. Menk as well as I do, I can safely state that he was not the man who wrote the following bit of "free verse":

### The New Furnace.

Last night I met  
One of our citizens  
Who is ordinarily  
Very sweet tempered.  
He was very hard  
Just at that moment.  
He appeared,  
I imagined,  
As a man would  
Who had murder  
In his heart.  
His attitude  
Was so different  
I wanted to know  
And he told me His story:  
Last night  
I was on  
My way home  
To supper  
When "So-and-So"  
Invited me  
To go past his home.  
He said he wanted me  
To see his new furnace.  
And I knew that  
A furnace and coal  
Was not all  
That he kept  
In his basement.  
So I gladly went  
The six blocks  
Out of my way,  
And every step  
My hopes grew,  
And finally  
We went down stairs,  
And I imagined  
Some private stock  
Laid away there  
Several years ago.  
And I had already  
Decided what I  
Would send him  
As a Christmas gift  
To show that I, too,  
Was a regular guy.  
And as I said before,  
We went down the  
Stairs into the  
Basement,  
And sure enough,  
He did have  
A new furnace.



# Facts of Warm Air Heating and Ventilating.

## Reports of Progress in Warm Air Heater Research Work. Ventilating Factories, Theatres and Other Buildings.

### *Installers Offer Varied Comments on Heating Industry.*

In its recent questionnaire to the installers of warm air furnaces, AMERICAN ARTISAN concluded by asking for remarks.

The following replies indicate what was in the mind of the correspondent, and furnish an interesting commentary on the trade:

C. M. Acuff, Wichita, Kansas: "My hobby on furnace installation is everything oversize and all pipes short in length."

J. R. Everroad, Columbus, Indiana: "If the manufacturer would help their established agents in their local advertising instead of using thousands of dollars for waste basket materials, mailing them out indiscriminately, we would both do more business."

M. B. Miles, Clarion, Iowa: "The dealers are much to blame for poor installation as they will send out 'helpers' as practical men to install furnaces and try to get by with it. This is one thing that should be controlled in some way, by state laws or other ways."

W. M. Sorenson, De Forest, Wisconsin: "I am for anything for the good of the trade."

B. F. Stow, Wyanet, Illinois: "I regard your efforts to bring about better trade conditions and better furnace installations in your Warm Air Heater Special through your questionnaire as highly commendable and valuable."

John A. Pontius, Geneva, New York: "I think all furnace manufacturers should examine a few of each dealer's jobs to satisfy them first that the dealer employs competent managers of the heating installation before selling them any goods."

John F. Werner, Tracy, Minnesota: "I would like to see a law

passed to make all buildings to be heated with pipe furnaces, to have 6 inch or 8 inch partition instead of 4 inch."

W. A. Standin, Eau Claire, Wisconsin: "I believe that each man installing furnaces should study his craft and install every job just as nearly right as he can."

A. H. Cobb, Jackson, Michigan: "I have had thirty-five years' experience in the warm air heating and in a year in Jackson I have increased my business from \$10,000 to \$65,000, which I will do this year."

R. D. Grieves, Wheaton, Illinois: "I think your Warm Air

Heater Special is a good thing for us all."

H. A. Foster, Des Moines, Iowa: "I think cold air faces should be placed on inside walls to stop cold draft on floor or your hot air will go to outside wall and cold air will draw it across floor, therefore, eliminating cold draft. Would like to hear some remarks on this subject."

Ernest Woodworth, Loveland, Colorado: "The most important thing it seems to me is for the manufacturers of heating plants to quit letting every Tom and Dick sell their goods for soon it will ruin the business because of poor installation and unsatisfied customers."

### *Installers Should Instruct Home Owner or Occupant in Correct Firing Methods.*

#### *The Best Furnace, Properly Installed, Will Fail to Give Full Satisfaction If Carelessly Operated, Fired and Cleaned.*

THE following directions for operating warm air furnaces apply in particular to the Super-Smokeless furnaces manufactured by the Utica Heater Company, but the greater portion and in all essentials they may be said to fit the average type of warm air furnaces and we are glad to give further publicity to this important factor which goes so far toward making the customer satisfied with his purchase.

Every installer should make it a point to instruct the occupant—especially the person who is to look after the new furnace—in the proper methods of firing and cleaning it, and a printed set of such instructions should really go with each installation, to be posted in a conspicuous place near the furnaces.

The directions follow:

1. To start fire, open dampers in Ashpit Door and in Smoke Pipe. *Close Check Draft.* Kindle fire in

the usual way, adding coal as the wood fire gets under way.

After the fire is well started and the firepot filled with coal to a level of bottom of Feed Door open small door marked "Super-Smokeless" and allow this to remain *open wide* when soft coal is used. For Hard Coal, Coke, or Semi-Bituminous coal this opening should be decreased by means of the ratchet.

When adding fresh fuel *close* the Super-Smokeless door, check draft and damper in ashpit door. Re-open Super-Smokeless door when feed door has been closed.

When the heating plant is in operation the manipulation of lift door in ashpit door and the check draft is accomplished by means of chains fastened to a regulating plate, usually placed on a wall at floor above. If a Thermostatic Regulator is used the manipulation of these dampers will be automatic with the rise and fall of room temperatures.

2. To shake grates, insert shaker through openings in ashpit door and revolve the two shaker bars until fire is cleaned as much as necessary. In mild weather the grates can be gently rocked back and forth instead of revolving. While shaking, the check draft and damper in ashpit door should be closed. *Be sure to leave a flat surface of the grate after shaking*—in order to do this, remove the shaker so that a flat side of the end of the shaker will be parallel to the floor. Otherwise the grate may be warped or burned out.

3. Keep the firepot filled well up to the lower level of the feed door and heaped up in the center. This applies in mild weather as well as cold weather. Some people keep a low level in their firepot to save fuel. As a matter of fact this is an extravagant way to run a furnace. The fire should be retarded in mild weather by shaking the grates less frequently.

4. Remove ashes every day. Any grate bar may be burned out in a few minutes if the ashes are allowed to accumulate in ashpit.

5. Air Moistener. Keep this well filled with water at all times. Proper humidity is created by means of the water evaporated, insuring a healthful and comfortable heat.

6. Have radiator, smoke pipe and chimney cleaned as soon as the fire is out for summer. A clean furnace uses less fuel and there is less damage by rusting.

7. Cold air duct should at all times be open. If it is an outside cold air supply, it should be partially closed in severe and windy weather. If it is an inside supply it requires no regulation. Never allow the cold air duct to be shut off while there is a fire. It is impossible to heat your rooms without sufficient air supply. Closing the air supply may result in burning out a furnace.

8. Failure to heat a house satisfactorily is, in nine cases out of ten, due to poor draft. In these advanced times furnaces of ample size are usually selected, and are installed on correct principles. No furnace, however, has a draft of its

own, and if the chimney is not a good one, good results cannot be obtained. A poor chimney burns the same amount of coal without giving more than half the heat which would be obtained if there were a good draft. It is important, therefore, to be sure that your chim-

ney supplies a good draft.

9. No rules can be made which will exactly apply to all furnace jobs. Every heating plant should be carefully studied and the intelligent house owner will find the way to get the best results with the least amount of fuel.

## Tests Show Effect of Changed Recirculating Air Duct on Capacity of Warm Air Furnace.

*These Tests Were Made at University of Illinois and Apply Only Where Gravity Circulation Is Used.*

By A. C. Willard (1), A. P. Kratz (2) and V. S. Day (3).

THE following discussion is a typical illustration of the kind of information which the University of Illinois and the National Warm Air Heating and Ventilating Association are developing in the Warm Air Furnace Research work which is being carried on jointly by these two agencies at Urbana, Illinois:

### General Statement.

One of the most interesting series of comparative tests which has been carried on in the Warm Air Furnace

(1) Professor, Heating and Ventilation and Head of Department of Mechanical Engineering.

(2) Research Professor, Mechanical Engineering.

(3) Research Assistant Professor, Mechanical Engineering, University of Illinois.

Research Work at the University of Illinois was the investigation of the effect of the recirculating duct on the capacity of a gravity warm air furnace. The results are of special interest to the installer and house owner, and since these ducts may materially increase or decrease the heating capacity of any given furnace the furnace manufacturer should be equally interested. When the difference in design of two common types of recirculating ducts may affect the furnace capacity by as much as 22%, the details of these ducts, which account for the difference, become of vital importance to everyone connected with furnace installation.

The only change in the duct de-

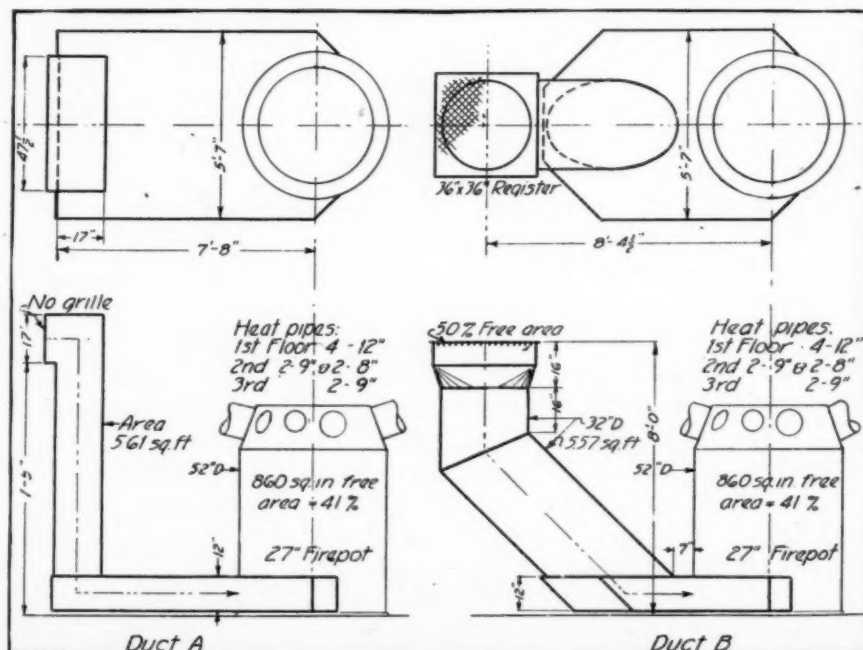


Figure 1.—Two Types of Return Air Ducts.

sign, or in the entire plant, was to eliminate two right angled elbows in a rectangular duct with a vertical recirculated air inlet and substitute two 45° elbows with a round duct and a horizontal recirculated air inlet. In fact, the round duct with the 45° elbows developed its superior air passing capacity with a register grille of only 50% free area at the inlet, whereas the rectangular duct inlet was without any grille at all.

#### Description of Plant and Tests.

The furnace plant used in the tests was identical for both cases except for the changes necessary (Figure 1) in the recirculating system. The tests were made as follows:

(1) A group of four tests was selected from previous work, for comparison. These tests were run

Table I.—Comparison of Furnace Capacities for Two Types of Recirculating Duct

Air Temperature Average at Registers	(1) Capacity B.t.u. per Hour Rectangular Duct	(1) Capacity B.t.u. per Hour Round Duct	Per Cent Increase Round Duct
130 (Low)	62,500	71,000	13.6
160 (Moderate)	97,500	116,000	19.0
190 (High)	136,000	167,000	22.4

on the plant described under the "Main Plant" in previous reports, and on pages 18 and 19 of Bulletin Number 120, Engineering Experiment Station, University of Illinois. The essential features of this plant are shown in Duct A, Figure 1.

(2) A black iron inner casing was provided as in Group 1, extending from the recirculating duct connection to the top casing ring and spaced 1 inch from the outer casing.

A series of capacity tests were run over a wide range of operating temperatures, for this condition. The essential features of this plant are shown in Duct B, Figure 1.

#### Results of Tests.

The results of the tests are shown in the curves of Figure 2, in which the capacities (in B.t.u. supplied to the air per hour) are plotted on a register temperature basis. A marked increase in the weight of air, and in capacity (Figure 2) was shown to exist. The round duct without the bad right angle bends on the rectangular duct handled a much greater quantity of air. Table I contains a comparison of the two ducts, on a percentage basis, for three temperatures. It is significant to note that the improved duct has a center line length of 11 feet as against 14 feet for the rectangular duct. On the other hand, the improved duct was handicapped by having a register grille, whereas the rectangular duct had none. This has been found to be a considerable handicap, amounting to 4% of the furnace capacity at moderate register temperatures. The failure of the rectangular duct to handle the same quantity of air as the round duct may be ascribed to sharp right angle turns, greater length, and greater frictional surface for the same cross-sectional areas.

(1) These values were selected from the curves of Figure 2. Capacity means B.t.u. (heat units) per hour added to the air as it passed through the furnace and measured at the furnace bonnet, just as the air enters the leaders.

The way to run a one-price store is to sell to all customers at the same price. The customer favored with a cut rate will think you may be favoring others still more.

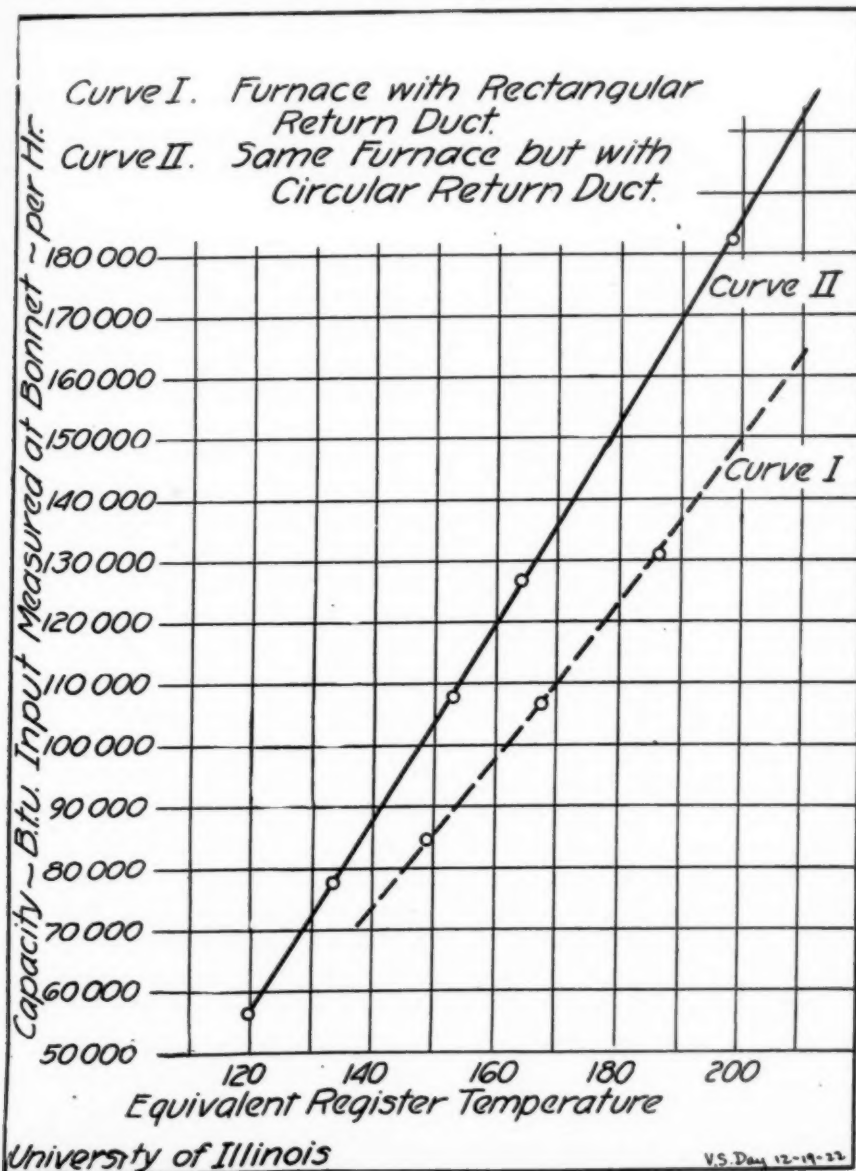


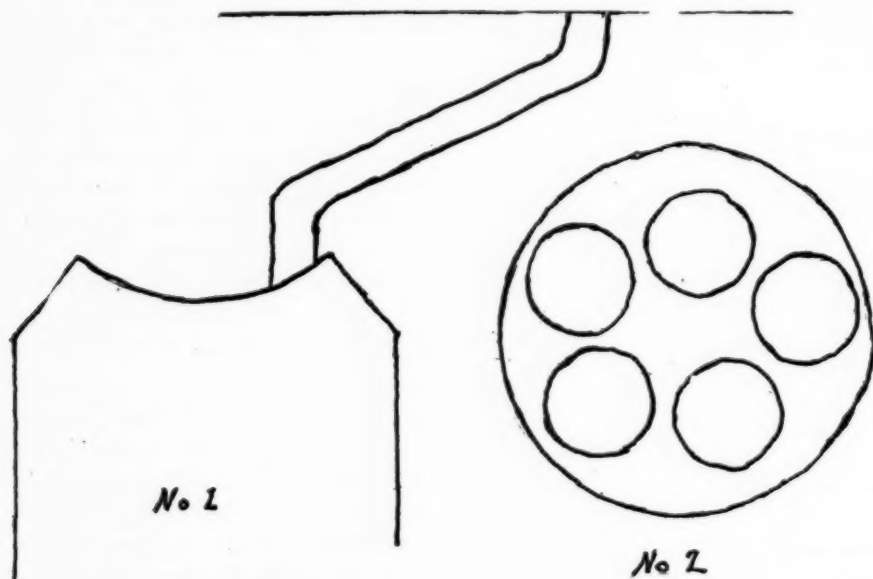
Figure 2.—Curves Showing Relation of Capacity to Shape of Return Duct.



### **Installer Claims This Plan Improves Clague Take-Off.**

Many installers of warm air furnaces have agreed or disagreed with the problem put by M. Clague of Bethany, Missouri, as to which of two plans he submitted would give a better take-off to the register. Here is a fellow-installer and fellow Missourian who disagrees with both plans, and submits a third, along with his argument. It follows:

Replying to Mr. Clague's problem will say that in my experience I have not been able to find any difference in that length run, but I have just finished a job of installing here where I had some long pipes.



Number 1—Furnace Showing Take-off Pipe From Draw-in Register. Number 2—Showing Collars on Top.

I tried the plan of Mr. Clague's plan A, and found with the amount of elevation I had that it would not carry, so I changed to B, running my pipes 12 feet, using all but four inches of my rise. That four inches was left for 18 feet of pipe and they worked out so on a short run with 24-inch rise, they would work out either way about the same.

But I prefer the way of B, especially when you can get all pipes that way. But I have found a plan that I have had better success with in deep basements where I could get as much as a 24-inch rise of which I am sending drawing. The plan is to draw the hood in so as to use

just about all of your space with a row of pipes around edge with almost flat top.

This plan works good, especially where only one cold air shaft is used as all pipes have about the same chance as the air has to be drawn clear over the heated castings to a small radius.

CECIL MINOR.

Hannibal, Missouri.

\* \* \*

Mr. Clague, Author of Problem, Makes Reply.

AMERICAN ARTISAN AND HARDWARE RECORD.

Dear Editor:

I was glad to read in AMERICAN ARTISAN of December 16th an answer to my inquiry of December

A will give better service than a pipe taking off as shown in sketch B.

We all know that heated air will have a greater velocity in ascending a vertical pipe than it has in a horizontal pipe, therefore, a warm air pipe taking from hood as sketch A is a detriment to the circulation of the air in that pipe for the reason that the velocity of the air in rising from furnace to elbow is so much greater than the travel from the elbow to register that it would cause an eddie at the elbow, thereby hindering circulation of the air in the rest of the pipe.

While with a pipe taking off as per sketch A the pipe has the same velocity from the furnace to the register and not in my opinion as much friction as there would be in a 45° elbow. I still claim that sketch A is the better way.

Brother Lichty, come again.

Thanking you for your answer and would like to hear from some other readers' also.

Yours truly,

M. CLAGUE.

Bethany, Missouri.

Thinks Sketch B Gives Greater Velocity.

AMERICAN ARTISAN AND HARDWARE RECORD, Chicago, Illinois.

Gentlemen:

Referring to article in December 9th issue of AMERICAN ARTISAN AND HARDWARE RECORD, Mr. Clague's query, "Which is better?" will say I can not agree with him that sketch A is better. I prefer B, as it gives the heated air a much faster start which will carry it far beyond the turn and if the velocity were measured at the register, I feel sure sketch B would show the greater.

In my work I have found that with proper circulation and no counter currents of air, the more rapidly you move that air, both hot and cold, the better the results. Hence, with all due respect to Mr. Clague's opinions, I have stated my reasons for not agreeing with him.

I think this way of bringing these problems before the trade through your good magazine is a mighty good thing. Most any of us can

9th, asking through the ARTISAN which would be the best of two ways to take the warm air from furnace hood to register as shown in sketch A and B, December 9th issue.

I was glad to read from B. H. Lichty his opinion on same, and while I agree with him in regards to neatness and head room, I do not agree with him as regards sketch B and taking off of warm air pipe of hood with a 45° elbow.

He says that I did not explain myself. I did not for the reason that I put the question and my reasons would come later. I claim that a pipe taking off as shown in sketch

learn from others. And the better the installation the more furnace business there will be in the future. My policy is to sell a real heating plant, not just so many pounds of iron and steel. Then you have the satisfaction that comes in feeling the job is done and done right and your customer will be so well pleased he will recommend you to others.

Wishing the AMERICAN ARTISAN force the Merry Christmas which you have earned in a year's work well done, I am,

Yours respectfully,

CHARLES WILSON.

With Brown Teyneh Scott Co.,  
Monmouth, Illinois.

**Favors Higher Elevation for Heat Delivery.**

AMERICAN ARTISAN:

I agree with Mr. Clague. A heat pipe taken from a furnace as in A is decidedly better than the method used in B for the reason that there is greater elevation and a more rapid delivery of heat.

The method used in B decreases the elevation and could be extended upward as I have shown until there would be no elevation and the flow of heat would be greatly retarded and if carried still higher would cease to flow altogether.

Yours truly,

J. T. HENSHAW.

Washington, D. C.

**This Experienced Installer Likes Sketch A.**

AMERICAN ARTISAN AND HARDWARE RECORD, Chicago.

Gentlemen:

In the issue of AMERICAN ARTISAN on December 9th, Mr. Clague of Missouri desires to be shown the better way to take off a warm air pipe from the top of a furnace. I wish to state that I have been in the furnace game over twenty years installing, selling and as trouble man and am acquainted with some of the tricks of the trade. My preference is for sketch A, my reason being that it is a direct line with a continuous rise without angles, has less friction, thus the air delivery is more free on account of less resistance.

Sketch B is a kink I do not use, only to secure head room on a spe-

cial pipe and usually I am obliged to use some method to overcome the lack of elevation.

Mr. Clague gives a rise of 24 inches between top of furnace hood and joist line. I find more often less and consider myself in luck if I do not have under 18 inches.

Yours truly,

C. M. JONES.

—, Michigan.

### **Not All Installers Use Cost Finding System.**

Some confusion is indicated in the replies received from furnace installers to the question put by AMERICAN ARTISAN AND HARDWARE RECORD, as to whether they were using a cost finding system enabling them to charge enough for time, labor and skill put on the job. Many installers replied they were using their own cost system, but there was lacking evidence that such a system approached the sound bookkeeping features and cost finding systems which modern business require, and such as is being described in the current series of articles in AMERICAN ARTISAN by George R. Doyle.

To the direct question "Do you use a cost finding system?" there was a great proportion of "Yesses" to a few "Noes." There were many indications that the installers were endeavoring to learn and put into practice a satisfactory cost finding system, as the following answers show:

"Yes. It often shows this item to be underestimated.

"I use a very close cost finding system and try keeping a plan of every job I do. By doing this, I know just how."

"We have through our 'work orders' and our present system of record keeping enough information to show costs."

"We use a time card system."

"Yes, every item is charged to the job, then you always know your profit or loss."

"I keep strict account of each job."

"I use an average overhead charge on job."

"Not a complete one, but surely wish I knew how or had the system."

"Estimate on material and labor."

"No, but my heating is high grade and above par."

"I always figure my cost and get a profit."

"Estimate from other jobs—some guessing."

"Yes, but find it hard to compete with those that don't at times."

"We use a cost system of our own."

"Time cards, but no other system."

"Use only actual cost of merchandise on marking goods."

"Have none."

"Not what you would call a system."

### **Midland Furnace Club Elects New Officers.**

At the annual meeting of the Midland Furnace Club, held January fifth, at Congress Hotel, Chicago, the following were elected to serve as officers and members of the executive committee during 1923:

President—W. D. Cover, Schill Brothers Company, Crestline, Ohio.

Vice-president—Roy C. Walker, Meyer Furnace Company, Peoria, Illinois.

Secretary-treasurer—Allen W. Williams, Columbus, Ohio.

Executive Committee—James M. Triggs, Majestic Company, Huntington, Indiana; John Kerch, XXth Century Heating and Ventilating Company, Akron, Ohio; J. T. Templeton, Buck's Stove and Range Company, St. Louis; John P. Wagner, Success Heater and Manufacturing Company, Des Moines; and E. B. Langenberg, Haynes-Langenberg Manufacturing Company, St. Louis.

The Standard Code for Installation of Warm Air Furnaces in Residences was indorsed and arrangements were approved by which a similar service on cost finding will be furnished to the members as the Western Central Stove Manufacturers' Association now provides for its members.

# Practical Helps and Patterns for the Tinsmith.

**Aids to the Improvement of Craftsmanship and Business.  
News from Various Branches of the Sheet Metal Trade.**

## *Design for Metal Tomb.*

By O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri. Written especially for *American Artisan and Hardware Record*.

In the enclosed engraving figure 21 we have what the writer believes to be the most sensible design for tomb a person can remember his dear ones by. It is of a small scale measurement, only about 2 feet to 30 inches wide and from 3 to 4 feet long, having a glass door in one

made of copper and is truly representative of the living faith in that the light still shows itself and radiates through the hearts of those looking at it, thereby changing the grimness of things to a far lighter, higher and holier aspect. When the lace curtains are attended to at intervals, there is really nothing better to typify the life that once was in a person's existence.

Designs may vary but care should be taken not to over-ornament it because it will detract from its original

The item of particular interest, says Secretary Paul R. Jordan, is the fact that the year ending August 1, 1922, took care of all its own obligations. The new year was started with not one cent of debt and with \$24.59 in the treasury, the national and state conventions paid in full, so every penny of the \$5.00 Auxiliary dues payable August 1, 1922, is available for use for the 1923 convention and other Auxiliary 1923 activities.

## *Missouri Sheet Metal Convention Is Set.*

The annual convention of the Missouri Sheet Metal Contractors' Association will be held June 25, 1923, at Hotel Statler, St. Louis, according to a circular sent to members by Secretary Otto E. Scheske. Communications may be addressed to Mr. Scheske at 3818 Maffitt avenue, St. Louis.

## *Old Subscriber Starts New Man Right in Business.*

Samuel P. Hedges, one of our old subscribers, has a friend who recently started in the sheet metal business, and naturally he wanted his friend to have the best help there is, so he sent us the following letter:

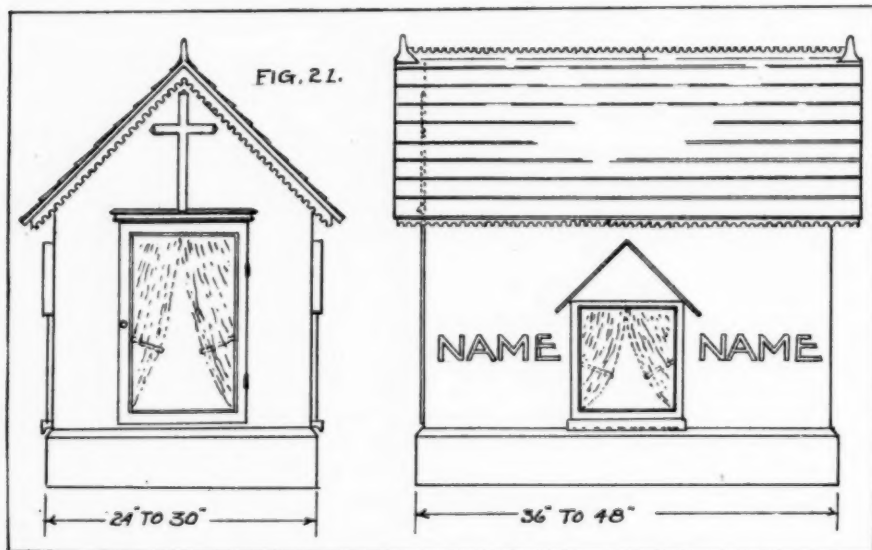
TO AMERICAN ARTISAN:

Enclosed you will find money order for \$2.60 for which please send AMERICAN ARTISAN for one year, also the Twentieth Century Sheet Metal Workers, to R. E. Mills, —, Indiana, who has recently opened a shop and wishes your journal as a helper.

I am taking the pleasure of doing what I can to get him started right.

Thanking you for the services you have rendered me in the past, and I know you will continue to do so, I am,

SAMUEL P. HEDGES.  
—, Indiana, January 9, 1923.



Pattern for Metal Tomb.

end and a small bay window on each side. Lace curtains are draped over the windows on the inside and here also you find photographs, vases with flowers and such other things a person wishes to place to the memory of their loved one.

The main feature is that the light streaming in leaves the appearance as though the soul is still illuminated and shines, sending forth its personality as when on earth. This is truly comforting over all the heavy rocks and superstructures erected which have absolutely no meaning, other than possibly vanity or remembrance to future generations. One of these little light houses is comparatively inexpensive when

purpose, causing visitors to inspect the structure rather than to contemplate on its purposes and achievement. So a common plain structure as we show, with slight alterations to make special tastes suitable, should be all that is needed.

## *Indiana Sheet Metal Auxiliary in Good Financial Condition.*

Treasurer Henley of the Jobbers' and Salesmen's Auxiliary to The Sheet Metal Contractors' Association of Indiana, made a financial report for the year ending August 1, 1922, which showed receipts, \$1,557.70; disbursements, \$1,533.11, and balance on hand, \$24.59.



# What Repair Man Needs to Know About the Automobile Radiator.

**E. E. Zideck Explains What It Is,  
What It Does and How It Works.**

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by E. E. Zideck, Instructor in Charge of Sheet Metal Work and Allied Lines at the Lincoln Institute, New York City.

## The Cellular Core.

### Lesson 6.

**T**HE *cellular core* is made of various pattern *corrugations* of metal strips forming both water channels and air passages. The cellular core has no separate head-sheets. It is soldered directly to the tanks.

The numerous metal plates of which the core is joined are impressed at their edges to meet, leaving their centers open for water to pass through, and the edges are soldered together by the dipping process. Thus, in a cellular core, both the front and the back edges of the metal joints are soldered and liable to leak.

### Questions.

1. What is a cellular core?
2. How is a cellular core joined at the edges of the metal strips?
3. Are there fins in the cellular core?
4. How does the air pass through a cellular core?
5. How does the water pass through a cellular core?
6. How are the tanks joined to a cellular core?
7. Does air touch every water channel wall in a cellular core?
8. How is the cellular core made? What sort of metal plates are joined in a cellular core?
9. What parts of the cellular core are dipped in solder?
10. In what parts of the cellular core is there water?
11. In what parts of the cellular core does air pass?
12. What object is there in having the air envelop the water channels in a cellular core?

### Review.

Describe minutely the difference in arrangement between the

tubular fin core and the cellular core.

Write down the various names applied to the parts and ways of joining parts in the two cores.

Visualize on paper what you understand under a tubular fin core and a cellular core.

Make diagrams of a fin core and a cellular core joined to tanks.

**Write correct answers to the following five questions:**

- a. What is the main part of the radiator? What kinds are there? Of what material are they made?
- b. What is the arrangement, in a core, by which water is made to pass through the current of air?
- c. What is the arrangement, in a fin core, by which water passes from upper to lower tank and, while under way, is cooled?

### Special Types of Fin Cores.

The *regular* fin core is made up of 3/16-in. diam. copper or brass tubes and horizontal fins spaced 3/16-in. apart.

Aside from these regular tubular cores there are a few makes with tubes oblong instead of round. Also there are some with heavier brass tubes (5/8-in. diam.) with fins spirally wound around them. These latter cores are most usual on heavy cars and trucks.

### Questions.

1. What is the regular fin core like?
2. Do tubes run horizontally?
3. Are there only *round* tubes in the tubular kind of core?
4. What tubular core is used on radiators for heavy duty trucks?
5. How are the fins arranged on the tubes of large diameter used for cores in truck radiators?
6. Do *fins* contain water?
7. What, in a fin core, contains water?

## The Cellular Core Structure.

The cellular core is made up of thin brass or copper plates, all from 2 to 6 inches wide, impressed so that two plates make a water channel closed at front and back; and two pairs of the plates, or two water channels, make a row of air passages.

The form of the air passages varies. There are regular *honeycomb* designs, round, square, heart shape, oblong, and star patterns.

The variation is in pattern only, not in the principle, which always is the same; i. e., two plates joined at their edges form a *cell* for water to pass through, and the *corrugations* of the plates form the variously shaped air passages.

A few makes there are in which the *cells* are not corrugated, but straight. Here one of the plates is folded so as to form projections about 5/16-in. long and 5/16-in. apart, which, when joined to the other *cell*, results in *square* shaped air passages intersecting the multitude of cells. In some of the older makes of cores these *intersections* are not a part of the cell, but are separate metal plates, corrugated soldered between the straight water channels of the core.

### Questions.

1. What is a *cellular* core?
2. Of how many metal plates is a cell or water channel formed?
3. How are the metal plates formed to admit of air passages?
4. What is done to the edges of the metal plates so that they join while the rest of the plates remain apart to permit the water to pass?
5. How many metal plates does it take to one water channel?
6. How many *cells* does it take to form one row of air passages?

7. What is a cell in a cellular core?

8. How does a cell or water channel provide for contact with air?

9. In a cellular core, what flows inside the cell and what outside the walls?

10. How many walls has a cell?

How many inside walls and how many outside walls?

11. How many cells are served by one air passage?

12. What are the various patterns of air passages which are formed by variously corrugated walls of the cells?

## *Only Monkeys Imitate, Don't Be a Monkey, Says Greenburg to Sheet Metal Man.*

*It's the Man Behind the Idea, More Than the Idea Itself That Counts.*

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenburg, Cleveland, Ohio.

JIM FOXSIE was busy with a newspaper man when I walked in on him. They were talking about an advertisement which Jim desired to run three times a week. Jim looked up and said:

"Glad to see you. You are just the man I need at this particular time. I want to run this ad, and can not decide how many times a week to run it."

Jim showed me the ad and asked my opinion of it. It was a fine ad, and looked good. I told him so. I noticed a smile of satisfaction on Jim's features.

"This ad," Jim said, "does not cost me a cent. I happened to pick up the *Journal* from Peoria and saw this ad. It has been run by a man whom I know to be a first class business man, and all I have to do is to change the name and it will fit me to a tee. Believe me, keeping your eyes open pays."

I happened to know the original advertiser in Peoria and know for a fact that he is a successful sheet metal man. Personally I did not care whether Jim used the ad or not, but I did not like the idea of stealing another man's business thunder. So I said to Jim:

"Your idea is all wrong. Why should you imitate another man who originated a good ad. It will do you no good, and it will only make you feel that you have stolen an idea."

"You are all wrong," Jim replied. "If it is good for him it must be

good for me. The originator of this ad will lose nothing, and I will gain by it, besides I am saving the price of having such a good ad written. You may call this imitating, but I call it good judgment." And again he showed that foxy smile that I did not fall for.

I felt sorry for Jim. He meant well perhaps, but I could not see any advantage in this cheap method of getting something. Both Jim and the Peoria advertiser were different kinds of men, and this ad did not seem in line with Jim's business. I thought for a moment, and finally decided to let Jim see the light of day. So I said:

"Jim, only monkeys imitate. A monkey goes through certain motions, but in the end he is a monkey just the same. Let me prove this to you because I do not want you to make a monkey of yourself."

"You'll have to show me!" Jim emphasized.

"I am willing to show you, Jim," I replied, "and when I am through with you you will not use this ad, but you will use your brain instead. Let us compare things. I happen to know the man who originated this ad, and I want to tell you that he is a real business man. While you may use the same ad, it will not mean the same results. For instance, you have a cornice brake which is exactly the same as his. Your slitting shears are just like his, and perhaps made by the same concern. Your solder and tin and

all of your other tools and materials are exactly the same as his. The same salesmen call on you as call on him, and you are both in the same industry. So far you are both even. He is successful and has a large establishment, while you are small and have a small establishment. In this point you are both directly opposite. What makes this difference, Jim?"

"I don't know the answer," Jim replied. "He is a more successful man than I am is perhaps due to the fact that he has been in business long before I ever dreamed about it."

"No. This is not the reason, Jim," I answered. "The reason is that he has better business brains than you have. You may copy his tools, his materials, his advertising matter and his methods, but if you can not copy his actual business brain, you will not benefit by it one little bit. He has real business building brains and that is something that he can not lose to anybody. What he knows is his forever. There is a difference between copying and originating. Copy is a monkey trick, and in business it is monkey business. But in originating anything, it takes real brain work. He has a mental backing to make this ad good, while all you have is the copy but not the actual brain."

"Well, what does that prove?" Jim asked.

"It proves this, Jim," I replied slowly so he could get it good. "That it is not the plan that makes success it is the man behind the plan that makes success. You are not the man behind this advertising plan that you chose. You get a roofing plan, but it takes roofing brains to do the job. The plans of the great world war lost the war for Mister Kaiser because he did not have the men behind them. If plans were all that a man needed for success, the AMERICAN ARTISAN AND HARDWARE RECORD would write a book of them, and make the entire industry successful. Jimmie boy, it is not the plan, it is the man behind the plan always. If you can not lay



out your own advertising plan, you are not the man to use anything better."

Jim was thoughtful for a minute or two. He did not smile any more. It seemed to get under his skin. Finally he asked:

"What's the answer to your explanation?"

"The answer is this, Jim," I replied. "Study your business and the kind of people you want to attract. Study your capacity to serve and advertise accordingly. The paper you want to advertise in is too big a newspaper for you because it reaches too many people that will never be able to use you. Its circulation is spread too far from your town. Place an original ad in the *Times* which is a smaller publication, but it reaches the people directly in your town who may be able to use your services. There are many people outside of your town that will read your ad but who have sheet metal shops in their territory. What you want is results in your own town not in other towns. Get the *Times* which has a smaller circulation and which is confined to your own territory and let the outside sheet metal shops alone. That is the answer. You may take it or leave it alone, Jim, but I am certain that I am right."

The representative of the newspaper arose and departed with a scowl on his face, but Jim was my friend and I believe I helped him.

Mr. Sheet Metal Man, do not copy anybody's ideas unless you are as good a man as the originator of the idea. Learn to be original and do your own brain work. There is no need for me to go farther into this matter except to say that if you will spend about fifteen minutes a day reading business "dope" you will fit yourself to become the man behind the plan. Get your brain and your plans to do some team work.

#### Apology.

Please do not infer that I believe that all sheet metal men are mentally unfit to do business. Praise God that I am not so narrow-minded as that. I am here writing to that

man who needs this common horse sense. If you are not guilty, just smile with me. If you are perchance guilty, *think* with me and be happy. Are you with me or agin me? Atta boy!

#### *Wisconsin Auxiliary Works to Secure New Blood for Sheet Metal Contractors' Association.*

The Travelers' Auxiliary of Wisconsin Sheet Metal Contractors' Associations is making a strong effort to secure new members for the sheet metal contractors' organization, and among the printed matter which Secretary Ellsworth C. Dunning has prepared is a combination application blank and "selling talk" folder, from which the following is taken:

#### Our Watchword.

Everybody is dependent on somebody for something.

Everybody must work with somebody to secure the best results.

This defines our watchword, "COOPERATION."

**Social Benefits.** Learning from your competitor (who is your fellow member) and thus being able to better yourself—no one is better able to advise you—no one is better company in your leisure hours—no one is better able to understand your troubles than he who is engaged in the same business as you.

**Trade Benefits.** Former years every master guarded his trade secrets most jealously; today he is ever willing to enlighten you. In your Association work you learn more in your gatherings than you did during your apprenticeship. You learn to realize that the other man has as much right to a living as you have and thus, through associating with him, you can profit both mentally and materially.

**Cooperation.** Association members have learned to buy together, enabling them to buy cheaper. They have learned to help one another with material in time of need. They have also learned to stand by each other when having labor troubles which are apt to arise when least expected. They have learned to assist each other in determining the

trustworthiness of men who ask for credit.

**Prestige.** Members of the Association, due to their membership, have gained in prominence in the commercial world to a grater extent than they fully realize. We are in an age of cooperation and regardless of your personal opinion you cannot close your eyes to the fact that the only defensive weapon you have is Association work. The individual who attempts to wage the battle of life single handed is like a straw in the wind.

**Material Benefits.** Members of this Association can share alike with the members of the Hardware Dealers' Association in the benefits of the Hardware Dealers' Mutual Fire Insurance Company, whose charge alone offsets the cost of membership. Each member of the state association is also entitled to have the fire insurance for his employees if he so desires, which will be a material saving to them, but above all, taking advantage of all the points enumerated is alone a great material benefit, to say nothing of the knowledge you acquire of correct cost of doing business.

**Conventions.** The Sheet Metal Contractors' Association of Wisconsin hold an annual convention which delegates of Local Associations and individual members are entitled to attend and take part in the deliberations. Our State Association is a member of the National Association of Sheet Metal Contractors which also holds an annual convention, and Local Associations are entitled to elect delegates to the National Conventions and individual members are also entitled to attend these conventions.

Fill out this application blank at once, accompanied by a check, and mail to the State Secretary, 456 Broadway, Milwaukee, Wisconsin.

At a recent annual meeting of the Master Roofers Association of Chicago, Mr. John Ingram, of the William Murdoch Company, was elected president, and Mr. V. M. Barbour, of the M. N. Powell Co., was elected secretary for 1923.



## *Past Year About Normal in Sheet Metal Industry with Business Outlook for 1923 Very Favorable.*

*Edwin L. Seabrook, Secretary, National Association Sheet Metal Contractors, Sees Building Boom Aid to Trade.*

THE business of the sheet metal contractors is linked with building construction. Sheet metal is used in the erection, both interior and exterior, of all classes of buildings of any size. It is replacing almost entirely some structures on the farm that were formerly made of wood, such as grain bins, corn cribs, shelters, tanks, troughs, etc. Poultry raisers use metal coops, feeding and drinking utensils.

This is the introduction of a prepared statement by Edwin L. Seabrook, Secretary, National Association Sheet Metal Contractors, reviewing trade conditions for the past and coming year. The statement continues:

The warm air furnace system of heating and ventilating dwellings is included in this industry. Repairs to the sheet metal part of building construction are no small portion of the annual volume of the sheet metal business. Forming a part of the business of several of the great industries of the country, it can fairly be considered as one of the trade barometers.

The principal commodities used are sheets, black and galvanized, tin roofing plate, sheet copper, zinc, lead, skylight and wire window glass, solder, warm air furnaces and the accessories, pipes of tin and registers.

In business volume the year has been just about normal. For a time the high wages of mechanics and prices of materials threatened to curtail operations, but the demand for new dwellings, buildings and alterations of old structures overcame this handicap. In passing it might be stated that iron and steel products "deflated" quicker and to a greater extent and are now nearer a pre-war basis than other building materials.

Like every other part of the building industry, the sheet metal

trade is feeling the pinch of the lack of skilled mechanics. This feature has been intensified by the automobile industry, which uses great quantities of sheet metal, drawing heavily for mechanics from the shops of the sheet metal contractors.

Many repairs to automobiles is distinctly sheet metal work, and this has absorbed a number of mechanics. The need of a future supply of mechanics through apprenticeship training is now fully realized and efforts are being made to increase the number through the establishing of apprenticeship training classes.

The demand for copper in building construction is rapidly increasing, due in no small part to the publicity given the merits of this metal.

The use of sheet metal is steadily increasing, not only in building construction, but in many other lines, and is now one of the leading industries of the country.

The business outlook for 1923 is quite favorable.

### *N. C. Yost Is New Manager of Hussey's Chicago House.*

N. C. Yost, for many years in the Production department of C. G. Hussey & Company, makers of copper sheets, tubes, rivets and other copper products, has taken charge of the Chicago offices and warehouse, located at 212 to 218 North Jefferson Street.

### *National Slate Association to Meet January 22 and 23.*

Announcement has been made of the advance program of the slate industry meetings to be held under the auspices of the National Slate Association at Hotel Commodore, New York City, January 22-23.

The morning session, Monday, January 22d, will be devoted to a

discussion of "Production Problems and Reduction of Waste," with Dr. O. Bowles, U. S. Bureau of Mines, presiding, while the afternoon session will be given over to "Accounting and Collection Problems," with C. F. Barker, F. C. Sheldon Slate Company, presiding. Slate statistics, freight rates, lessons from income tax reporting on depletion, depreciation, etc., are subdivisions of the topic.

Tuesday's morning session consists of trade cooperation meetings, led by Vice President G. F. Bernard. Discussion of the slate industry's campaign, slogan, insignia and 1923 objective also will be had at this session. The afternoon session will be devoted to an elaboration of this theme, including association activities, advertising, field service and research and election of officers.

### *Wisconsin Sheet Metal Men Will Meet March 14 and 15.*

At a meeting of the Board of Directors of the Master Sheet Metal Contractors' Association of Wisconsin, held January 10th, in Milwaukee, it was decided to hold the annual convention Wednesday and Thursday, March 14th and 15th, at the Republic House in Milwaukee.

The fact that the Convention Committee is headed by Paul L. Biersach and that Otto Geussenhainer, Sheboygan, and C. W. Pansch, Racine, are his fellow members insures a program that will be overflowing with helpfulness to the sheet metal contractor, and every man in the business who can possibly attend should make it a special point to do so.

### *Who Manufactures "Calamine" Iron?*

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Can you tell us what rolling mill makes "Calamine" iron?

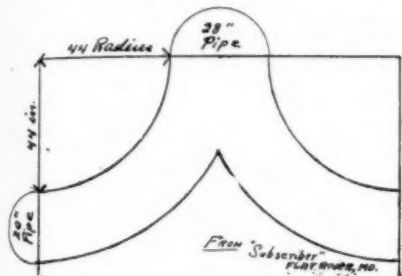
Yours truly,

FAUST MOTOR COMPANY.

—, Texas, January 4, 1923.

### How Would You Solve This Pipe Problem?

Another subscriber to AMERICAN ARTISAN AND HARDWARE RECORD appeals to fellow sheet metal workers to solve a pipe problem. How would you solve Mr. Murphy's problem as outlined below? Send



in your answers for the benefit of other readers. Here is the problem:

"I wish you would kindly put this problem in your paper for me and see if someone won't kindly solve it for me. I have a branch elbow and tee combined, the diameter of the larger pipe being 28 inches and smaller pipes being 20 inches, and to be made from 44-inch sweep from throat of elbow.

"Thanking you beforehand, I remain,

"Yours truly,

"J. ALBERT MURPHY.

"Flat River, Mo., Dec. 28, 1923."

### American Zinc Institute Quotes American Artisan.

*Is this something to think about?*

This query is put to the members of the American Zinc Institute in a cover-page reproduction of an article in a recent number of AMERICAN ARTISAN AND HARDWARE RECORD appearing in the January issue of *Make It of Zinc*, the official publication of the Institute.

The article referred to called attention to the expansion of business in the sale of prepared roofing material brought about by collective advertising. The inference from this question is that members of the zinc industry should consider something similar in the way of increasing consumer demand for zinc. The paint and varnish and the copper

and brass industries are other notable examples of collective advertising which are now bringing results in their respective fields. The article in AMERICAN ARTISAN was as follows:

"In considering the subject of 'Collective Advertising,' or 'Individual Publicity' think of this:

"The prepared asbestos and other ready roofing interests spent \$272,000 in 1915 for advertising; \$750,000 in 1919.

"The sales of these roofing materials in 1914 were 11,107,000 squares; in 1919, 30,000,000 squares. Will you note the steady pull in sales from the additional advertising? Can any one doubt that increased sales in composition roofing has been in direct ratio to the amount expended for advertising? Quicken the consumer's interest in any product he is using, and he will be a much larger buyer of it than if his interest is only latent."

## Youngstown Sheet and Tube Company Buys Steel and Tube Company of America.

*Capital of New Corporation Will Be a Quarter Billion Dollars, Third Largest in Field.*

**A**MERGER of the Youngstown Sheet and Tube Company and the Steel and Tube Company of America was announced by James A. Campbell, president of the former company. The consolidation will form the third largest steel concern in the country, being outranked only by the United States Steel and the Bethlehem Steel corporations.

The present merger calls for the Youngstown Sheet and Tube Company to take over the Steel and Tube Company, which has assets around \$114,400,000 and plants scattered throughout the Chicago steel district, employing several thousands of workers. The present merger follows closely the purchase of the Brier Hill Steel Company by the Youngstown company.

The Steel and Tube Company has \$16,800,000 preferred stock and 967,330 shares of common stock of a nominal par value of \$2.00 a share. The appraisal value of the new concern will be about \$250,000,000.

"The Youngstown Sheet and Tube Company has reached an agreement with the Steel and Tube Company of America for the purchase of its assets," President Campbell stated. "The attorney general and the Federal Trade Commission have been advised of this agreement and also that full details of the terms will be submitted to

them as soon as these can be prepared. Meetings of the stockholders and directors of the two companies will be called as soon as possible for the purpose of ratifying the agreement reached."

The Steel and Tube Company was incorporated in 1918 as a consolidation of the Iroquois Iron Company and Mark Manufacturing Company.

### Illinois Sheet Metal Men to Meet in Decatur, April 4.

F. I. Eynatten, secretary of The Travelers' Auxiliary to the Sheet Metal Contractors' Association of Illinois, has sent out letters informing members that the annual convention will be held in Decatur, beginning April 4. Members are urged to send in their 1923 dues of \$5 promptly, in order to insure the success of the meeting.

### Wants Parts for "Century" Chain Hoist.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Would you inform us where we can secure parts for a "Century" chain hoist?

MELZER SHEET METAL WORKS.

—, Wisconsin, January 6, 1923.

Wisdom consists in knowing when you don't know.



## Real Estate Dealers Make Use of Lasting Quality of Copper and Brass in Advertisements.

*Sheet Metal Contractors Can Well Afford to Make Special Effort to Boost These Metals.*

IT MAY be a coincidence, and then again it may be that the educational campaign which has been conducted by the Copper and Brass Research Bureau during the past year has made a deeper impression on real estate men than on others.

Whatever the case is, the fact remains that in one issue of a New York daily newspaper a large number of real estate advertisements

contained references to the fact that copper and brass were used in the construction of the homes advertised for sale, as evidenced by the accompanying illustration.

And it is worthy of note that these homes are not all of the high priced type, ranging from \$6,310 and up.

Get busy, you sheet metal men, and sell yourselves on gutters made

of something better than 30 gauge galvanized sheets. If you make yourself see the folly of selling 30 gauge stuff, you can sell the 24 gauge just as easily and you can also sell copper and zinc shingles instead of compositions made of rags, gravel and tar.

### Output of Copper Increases in 1922.

The smelter production of copper in 1922, according to the United States Geological Survey, as compiled from reports of the smelters covering the actual production for 11 months and the estimated pro-

**NEIGHBORS**  
**NOW THE HOUSE AND L**  
Stucco exterior, avoiding future painting; red cedar shingles. Electric lighting; floors concrete. Plenty of modern washbasins with drain-board. Cellar floors cemented down. Two closets, linoleum and hemmed down. Large closets in all rooms and white enamel plumbing fixtures. Handsome electric range, refrigerator. STANDARD SANITARY tiled throughout. Also a few extras. Ready to move into now. Lots mostly 40x100. Properties graded and planted.  
**Price: \$6,310 to \$7,500.**  
**OUR BIG REASON:**  
We had the land. New York gave us the splendid TAX EXEMPT LAW. because we contracted for quantity and paid CASH. You get the benefit of setting a real house at the right price. Two offices on property. Representatives always present.  
**KENT IRON & STEEL CORP.**  
**EDWARD E.**  
**SPRINGFIELD, L. I.**

**WHITE PLAINS.**  
**ENGLISH STUCCO-THATCHED ROOF.**  
Just completed, in select neighborhood, a real home, and well built. 9 rooms, tiled bath, breakfast nook; open fire places; hardwood floors throughout. Copper leaders and gutters; plot 50x100.  
**EXCEPTIONAL VALUE \$15,000.**  
Other high-class houses, \$12,000 to \$27,000.  
E. L. JUST, Owner.  
44 Martine Av., White Plains. Tel. 3303.

**TWO LARGE BRICK HOUSES,** just completed; latest improvements; very attractive; 3 minutes from 2 railroad stations; tapestry brick, with tile roof; 10 rooms, 4 baths, dressing rooms, built-in shower, vacuum cleaner, hot-water heater, stove, electric icebox, hardwood floors. Copper leaders and weather strips to all windows. Oak floor in kitchen, special gas range; two-car garage. Call on premises, 40 Harmon Av., or telephone 4772 Pelham or Frank Heard, 39 Cortlandt St., New York. 9160 Rector.

**PELHAM.**  
Brick house, 9 rooms, 2 bathrooms, fireplace, hot water heater, copper leaders and gutters. Plot 100x100. Price \$23,500. Terms arranged. Call on JAMES R. CONNOLLY, 187 Lane, Pelham, N. Y. Tel. 1985, Res.

**SCARSDALE (123 Edgemont Road)**  
Beautiful brick home; ten rooms, two showers; Anaconda tiled roof; hot-water heat; charming view. See today. Fitzroy 1570.  
61 West 34th.

**WHITE PLAINS—\$14,000.**  
Fine section, near trolley and station; plot 60x125; Colonial house of 7 rooms, 2 baths, steam heat, electricity, oak floors on first, open fireplace, copper leaders and gutters, etc.; terms.  
R. FRANKLIN HULL, 17 Orawaupum St., White Plains. Tel. 2060-1.

**PLAINFIELD.**  
\$10,000—Handsome Colonial, best of everything; hardwood floors and trim, sun room, fireplace, fully tiled bath, copper leaders and gutters; attractive black and white; charming high lot; excellent view; monthly payments for it.  
J. J. SCHWARTZ, REALTOR, Babcock Bldg., Phone 2693 Plainfield, N. J.

**\$21,000—Large living room, sun parlor, paneled dining room, pantries, tiled kitchen; 5 bedrooms, 3 baths, sleeping porch; oak floors, copper leaders and gutters; large plot.**

**The House Beautiful**  
**UP-TO-THE-MINUTE CONSTRUCTION.**  
AT NEW ROCHELLE—In select high location; 12 minutes' walk to Main line station; two blocks from trolley. New stucco house; 8 large rooms, 3 baths (two fully tiled, with shower), hot-water heat, gas and electricity, oak floors, tiled kitchen, very large tiled sun-parlor with open fireplace; also, copper leaders, gutters, etc. and lot. Copper shingles, gutters, etc. Will make a charming home. We have other high-class listings. KIRKHOFFER, 22 North Ave., Tel. 55 New Rochelle, N. Y. OPEN SUNDAYS.

**To be sold, completely furnished, ready for occupancy.** Neither effort, nor time, was spared in creating an estate befitting a gentleman's home. Ideal for entertaining. From the ground floor, with entrance hall—24' x 60'—to the drawing rooms, dining room, breakfast room, it radiates hospitable warmth. The same charm is expressed in the second floor, with its seven master's bedrooms and seven baths with fireplaces and electric heaters. The laundry is connected with the steam cleaning system, runs direct to rooms. Brass piping, copper roofing, gutters and leaders, and the steam plant equipped for cost of gas, and other exceptional features. The property includes a fireproof garage and stable, with complete living quarters.

**A booklet De Luxe, with 16 illustrations, descriptive of this superb estate, will be sent to you upon request to**  
**Owner, Room 1924A, 342 Madison Ave. Phone 9433 Murray Hill**

**VISIT TRIBUNE MODEL HOME**  
ment Gardens; then call M. L. LARCHMONT 22, and see his copper leaders and gutters. at prices as low as quality will permit.  
**OLCOTT & EGER,**  
51 East 43d St. Phone Murray.

**BRONXVILLE—New Colonial type brick house, 9 rooms, 3 baths, copper gutters and leaders, slate roof; every detail improvement; plot 100x100; shade trees; restricted neighborhood; 7 minutes' walking distance station; offered below replacement cost to force sale. X 2462 Times Annex.**



	1921	1922
Refinery production from domestic sources.....	609,000,000	897,000,000
Refinery production from foreign sources, including estimated imports of refined copper.....	411,000,000	501,000,000
Stocks of new refined copper January 1.....	659,000,000	459,000,000
	1,679,000,000	1,857,000,000
Exports, including unrefined black blister and converter copper in bars, pigs, and other forms, and refined in ingots, bars, rods, etc.....	609,000,000	698,000,000
Stocks December 31.....	459,000,000	277,000,000
Total withdrawn on domestic account.....	611,000,000	882,000,000
	1,068,000,000	975,000,000

duction in December, was about 981,000,000 pounds, an increase of 475,000,000 pounds over 1921. Productive work was resumed by practically all the large mining companies except the United Verde Copper Company by or during April, 1922, one year from the general shutdown of the copper mines. The smelter production of copper for December, as estimated by the producing companies, was 103,300,000 pounds, or at the rate of about 1,240,000,000 pounds a year.

The total production of new refined copper from domestic sources, determined in the same manner as the smelter production, was about 897,000,000 pounds, 288,000,000 pounds more than in 1921. The refinery production of new copper obtained from domestic and foreign sources, including the imports of refined copper, was about 1,398,000,000 pounds. In addition to the output of new refined copper, about 112,000,000 pounds of secondary copper was produced at the refineries, making the total output of the refineries about 1,510,000,000 pounds.

Although the new tariff act placed no duty on copper, it affected the records of the Department of Commerce, in which a line of division was drawn on September 21, when the new tariff became effective. Up to that date the total imports of copper in ore, concentrates, matte, blister, and refined copper amounted to 363,443,226 pounds, of which 75,556,317 pounds was refined copper and 192,050,397 pounds was blister copper. The exports for the first ten months amounted to 634,501,851 pounds. The figures for later imports will not be available until January 15, 1923, but those

for later exports will be available somewhat sooner.

The stocks of refined copper in the hands of domestic refineries on December 31, 1922, as estimated by the refining companies, were about 277,000,000 pounds, compared with 459,000,000 pounds on December 31, 1921. The stocks of blister copper and material in process of refining, in the hands of the smelters, in transit to refineries, and at refineries, on December 31, 1922, were estimated by refining and smelting companies at about 352,000,000 pounds, compared with 283,000,000 pounds on December 31, 1921.

The quantity of primary refined copper withdrawn on domestic account during the year was about 882,000,000 pounds, calculated as shown in above table.

### Notes and Queries

#### Chain.

From John G. Knodle, Hunter Hardware Company, Rockford, Illinois.

Kindly let me know where I can buy chain such as is used on gravity, motor thermostats.

Ans.—American Chain Company, Corbin Screw Corporation and Plume and Atwood Manufacturing Company, all of Waterbury, Connecticut.

#### Copper Shingles, Eaves Trough and Conductor Pipe.

From R. W. Gordon, Eminence, Kentucky.

Please tell me who makes copper shingles, eaves trough, conductor pipe, etc.

Ans.—Anaconda Copper Mining Company, 25 Broadway, New York City; C. G. Hussey and Company, Pittsburgh, Pennsylvania,

and Milwaukee Corrugating Company, Milwaukee, Wisconsin, can supply you with all of these items. David Lupton's Sons Company, Allegheny Avenue and Tulip Street, Philadelphia, Pennsylvania; Ferdinand Dieckmann Company, P. O. Station B, Cincinnati, Ohio, and National Brass and Copper Company, Lisbon, Ohio, make copper eaves trough and conductor pipe.

#### Lamp Burners and Collars.

From L. L. Furman, Williamsburg, Iowa.

Please advise me where I can buy lamp burners and collars.

Ans.—Plume and Atwood Manufacturing Company and Scovill Manufacturing Company, both of Waterbury, Connecticut.

#### A. B. C. Power Washing Machine.

From Fitzgerald Hardware, Madison, South Dakota.

Who makes the A. B. C. power washing machine?

Ans.—Altorfer Brothers Company, Peoria, Illinois.

#### Metal Minnow Buckets.

From J. A. Van Pelt, Morrilton, Arkansas.

Kindly tell me what firms make metal minnow buckets.

Ans.—Baker, Murray and Imbrie, New York City; Deshler Mail Box Company, Deshler, Ohio; Gueder, Paeschke and Frey Company, Milwaukee, Wisconsin; J. J. Hildebrandt Company, Logansport, Indiana, and Planet Company, Westfield, Massachusetts.

#### Bird Houses.

From McQuesten Hardware Company, 123-125 West Second Street, Muscatine, Iowa.

Kindly send us a list of companies making bird houses.

Ans.—Joseph H. Dodson, Kankakee, Illinois; Put-Together Handicraft Shop, Elmhurst, Illinois; Evan L. Reed Manufacturing Company, Sterling, Illinois, and Crescent Company, Toms River, New Jersey.

#### "Stovink."

From The J. A. Battin Stove Supply Company, 1641 Lawrence Street, Denver, Colorado.

Can you tell us who makes the liquid called "Stovink"?

Ans.—Johnson's Laboratory, Incorporated, Worcester, Massachusetts.

# The Latest News About Stoves and Ranges

Items and Discussions of Interest to the Manufacturer and Retailer of Kitchen Ranges, Heating Stoves and Accessories.

## *American Stove Company Celebrates Twenty-First Anniversary.*

On January 7th it was twenty-one years since the American Stove Company was organized, and remembrances in form of great bouquets of roses were presented to the officers who have served this progressive organization since its inception, as follows:

President, C. A. Stockbridge.  
Vice-presidents, George M. Clark

and D. E. Dangler.

Treasurer, George F. Fiske.

Director, Louis Stockbridge.

The American Stove Company is composed of the following "divisions":

Quick Meal Stove Company, St. Louis, Missouri; National Stove Company, Lorain, Ohio; Reliable Stove Company, Cleveland; New Process Stove Company, Cleveland; George M. Clarke & Company, Chicago; Dangler Stove Company, Cleveland.

## *You Cannot Tell How Much Money a Man Has by the Looks of His Overcoat.*

*Nor Can You Tell Whether You Have a Stove Prospect from What He Says When He Enters Your Store.*

**T**HIS is the true story of how H. S. Campbell won and lost the title of "the best stove salesman who makes Omaha"—some eighteen years ago.

Campbell at that time was a junior salesman, working under the direction of Elliot A. Smith, who is now one of the vice-presidents of the Copper Clad Malleable Range Company.

Campbell and "Smithy" were conducting a demonstration sale in the hardware store of John Hussie, father of Maurice D. and John H. Hussie, both of whom have gained prominence in their respective fields, Maurice having served as President of the National Retail Hardware Association and "Harry" being a former President of the National Association of Sheet Metal Contractors and now the very active Secretary of the Western Warm Air Furnace and Supply Association.

There had been a good business during the sale, and both Campbell and "Smithy" had a goodly number of ranges to their credit; in fact,

they were practically even, so one evening "Harry" proposed that the following day they were to have a contest which would decide who was really the best stove salesman in Omaha, admitting for argument's sake that none else was in their class.

Now it is a well-known fact that it is an extremely difficult proposition to make a colored person pay cash in full for anything, also generally it is a very easy matter to persuade that same person to agree to buy, provided he doesn't have to pay a large lump sum at once.

So for the test "Harry" proposed that on the day in question the two salesmen should make a special effort to land a colored customer with cash enough to pay in full for one of the ranges being demonstrated, the cash price being \$55.00. They were to take turns in "waiting" on prospects among the colored population.

But, try as hard as they knew, noon came and not a colored cash customer.

After lunch, however, fortune

seemed to favor "Smithy," when it was his turn to demonstrate the range to a very well-dressed colored lady who had all the appearance of "ready money."

He did his best, which was so good that the woman in a short while agreed to buy and marched down to the cashier's window, where Harry presided for the moment. She opened her flashy pocketbook and planted down on the glass shelf at the window—one big shining silver dollar.

Harry looked at the dollar, then at "Smithy," then at the woman, and finally asked, "What is that for?"

"That, Suh, is ma fust payment on that range over thah, that Ah just bought from this gennelman."

You know how courteously and polishedly Harry can turn a fellow down, so he started to tell her that this was a strictly cash proposition, but he had not gotten half way started when she grabbed the dollar and pranced out of the store—and "Smithy" got the "Ha ha" from the boys.

Toward evening an elderly colored woman came in and Campbell took her on. She liked the looks of the range and evidently was much impressed with Campbell's eloquence, for she asked within a short time, "What am your terms?"

"Oh, this is a strictly cash sale, madam. You see, we give this beautiful set of dishes and the manufacturer insists that at this extraordinarily low price we must sell only for cash.

"Well now, dat is sure too bad. Ah didn't come here with moh dan two dollars in mah pocket, but will it be all right if Ah go home and git thutty dollars and then pay the rest when de range is sent up?"

Campbell assured her that would be fine, so she went out, while the boys gave him the silent "rasp-



berry," thinking that his talk had availed him nothing.

About an hour later she returned, however, and the laugh was on the boys, and Harry fixed up a fine sign stating that H. S. Campbell was the champion stove salesman in Omaha, hanging it in a prominent place in the stove department.

A couple of months went by, and one day the old lady came in wanting to know from Harry when he was going to deliver her range.

"Why," said Harry, "the understanding was that you were to pay the balance of \$25.00 before delivery. We have the range here with a ticket marked with your name and we will send it up just as soon as you pay that \$25.00."

"You all have got that wrong, Suh, Mr. Harry. That little sawed-off runt done told me plain enuf that Ah could pay thutty dollars down and de balance every so often. Dat's de God's truf."

Harry did his best, but the old lady stuck to her side of the story, until finally she asked if he wouldn't kindly let her have her thirty dollars as she needed it badly and couldn't pay the twenty-five.

To get rid of her, Harry made the refund, and down came Campbell's trophy. The contest was undecided. Neither Campbell nor "Smithy" had been able to make an actual cash sale to a colored person.

But here is the interesting sequel:

A couple of years later Campbell had gone with the Copper Clad people and was again in Omaha, this time in another store, for a range demonstration, when one afternoon who should come into the store but this same old colored lady.

"You all selling stoves today?"

Campbell, recognizing her, answered politely but somewhat carelessly that they were, and as another, white, prospect came up just then, he got busy with Number two, leaving the mammy standing without attention.

The owner of the store saw her there after a few minutes and asked her if she wanted to buy a stove.

"Yassuh, Ah reckon Ah wants to git me one of dem fine set of dishes

while de gitting is good, but dat dere little runt done left me for de white lady."

The owner smoothed her ruffled feathers and after a short while got her to the point where price and cash were the important points. He explained that during the demonstration—and only during the demonstration—would the dishes go with the range, and that she would have to pay cash.

"Dat's all right, Suh. Ah brings de money right wif me," and she dug out \$75.00 in bills and silver in payment.

"That," says Campbell, "taught me a lesson which I'll never forget—that when it comes to guessing who has money to pay cash and who is willing to pay cash when he has it, there is no use of trying to guess. I always go on the theory now that everybody who comes into a store during a demonstration is a prospective buyer of a Copper Clad range. So I go after them and take my chances."

### ***Does Your Advertising Fit Your Business?***

The George Batten Company is one of the large advertising agencies which take their own medicine. They advertise their business in publications that reach advertising managers and heads of manufacturing enterprises, for the purpose of establishing connections with such men which will help the George Batten Company to sell its services to concerns that can make profitable use of such services.

Under the heading, "Is that all there is to advertising?" they emphasize the fact in one of their most recent advertisements in *Printers' Ink*, that advertising must first mould favorable public opinion, as follows:

"A critic got after our advertising. He said, 'You people talk about advertising moulding favorable public opinion.

"Why don't you talk about selling goods? Public opinion is all right, but what I want to know is

how about sales, profits, turnover, more distribution, window displays, bigger earnings, as a result of buying advertising.'

"It's not a very strange thing for a business man to want these things. Most of them do.

"This man doesn't want to wait for favorable public opinion. He wants to go straight to the mark for more sales and greater profits. He wants a public actually buying his goods—not just a public getting more favorably disposed toward buying.

"Nevertheless, the way advertising works is through the moulding of favorable public opinion.

"The quality of an article, its price, its competition, its method of sale, and the extent to which people actually need it affect immediate sales more than advertising does.

"Advertising is a relatively new thing. But it is not so new that people who buy it should be uninformed as to how it works.

"Whether the results from advertising are fast or slow, the process is the same—it is the moulding of a favorable public opinion for articles or services that deserve it."

### ***Western Central Stove Makers Elect Officers for 1923.***

At the annual meeting of the Western Central Association of Stove Manufacturers, which was held at the Congress Hotel, Chicago, January fourth, the following were elected to serve as officers for 1923:

President—David Kahn, Estate Stove Company, Hamilton, Ohio.

Vice-president — L. L. Booch, Bridge & Beach Manufacturing Company, St. Louis.

Treasurer—J. A. Underwood, Favorite Stove Company, Piqua, Ohio.

Secretary—Allen W. Williams, Columbus, Ohio.

Never take your eye off the enemy who offers to do you a favor. —*Rudygram.*



# Events and Progress of the Hardware Trade.

## What the Retailers, Jobbers and Manufacturers Are Doing. Latest Selling Methods and Experiences of Successful Men.

### *Chicago Retail Hardware Men Banquet and Install Officers.*

Wednesday evening, January 10th, the Chicago Retail Hardware Association held its annual banquet and installation of officers. A. G. Pedersen, editor of *AMERICAN ARTISAN AND HARDWARE RECORD*, was toastmaster and also installed the new officers, who are as follows:

President—W. J. Connell.  
Vice-president—J. Claridge.  
Secretary—S. J. Koehler.  
Treasurer—W. F. Sievert.  
Financial Secretary—John Hora.

As a sign of appreciation, Mr. Pedersen presented on behalf of the Association, to John W. Wallace, the retiring president, a solid gold watch chain and Masonic charm. John, who under ordinary circumstances is a fairly rapid speaker, was simply struck dumb, but finally managed to say thank you.

There was no speechmaking except the few remarks made by the toastmaster in charging the new officers and a short review of business conditions.

About ten o'clock the floor was cleared and for about two hours dancing was enjoyed by the members and ladies, numbering about one hundred.

### *Parker Supply and Kalon Company United.*

Announcement has just been made of the formation of the Parker-Kalon Corporation, uniting the interests formerly connected with the Parker Supply Company of New York City and the Kalon Company of Jersey City, New Jersey.

The new company will manufacture the products heretofore made and sold by these concerns, and market them under the trade name "Parker-Kalon." These include hardened sheet metal screws, self-

tapping screws and drive screws; shurgrip file handles and solder iron handles; sash chain; damper quadrants and accessories; metal punches and dog mallets.

The general offices of the new corporation will be at 352-362 West Thirteenth Street, New York City. In its announcement to the trade, the company states:

"Through this unification of the interests formerly connected with the Parker Supply Company and the Kalon Company, substantial economies will be effected in manufacturing operations and in the cost of marketing the products. It will also result in better service to the trade, permit of closer cooperation with distributors, and make possible other important advantages through the coordination of all selling activities.

"The new company is possessed of large manufacturing capacity, assuring the trade of prompt deliveries on all items.

"Mr. Louis Goldberg, of the Kalon Company, has been elected President of the Parker-Kalon Corporation. Mr. Charles H. Trott, Sales Manager of the Parker Supply Company, will continue in the same capacity with the new company. Under the guidance of these two men, who are largely responsible for the commanding position the Parker Products and the Kalon Specialties enjoy today, it is expected that the products of the new company will be pushed into greater popularity in the future than they have ever enjoyed in the past."

### *Jobbers Ask Uniform Plan for Making Out Invoices.*

The American Hardware Manufacturers' Association sent out to its membership a recent circular bringing to attention certain points in connection with the making out

of invoices, and the following requests were made of manufacturers by the jobbers:

*First*—Specify each product by name as well as by number, to illustrate—1 Gross No. 44 Axes, not 1 Gross No. 44.

*Second*—Place terms on each invoice.

*Third*—If freight is allowed mention it on invoice.

With regard to this one jobber writes: "When there is a freight allowance we respectfully request that you urge the manufacturers to show this freight allowance on the invoice and deduct the amount from the face of the invoice. Some manufacturers quote 25 cents, 35 cents or 50 cents freight allowance and it does not appear on the invoice, and if the clerk who checks invoices is not particular, this matter of freight allowance is overlooked and invoices invariably paid in full. Later on, after investigation, it requires considerable correspondence to get the matter straightened out. If the goods are sold f. o. b. point of delivery, freight should be deducted from the invoice; the manufacturers have the shipping weights on the bill-of-lading and it would be an easy matter for them to make this freight deduction on the invoice.

"Some manufacturers have the habit of quoting freight allowance or full freight allowed and not to show it on their invoices, and, again, they have the habit of sending the memorandum bill-of-lading and 80 per cent of them have neither the rate nor the weight inserted in the bills-of-lading and it is next to impossible for the jobber to deduct the proper freight allowances or the proper freight and we have to rely on the railroad company's bills to make freight deductions and invariably the goods arrive long after the discount period has expired.

# Suggestions and Plans for Window Displays.

## Instructive Examples from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

### Carefully Designed Window Sells Auto Accessories.

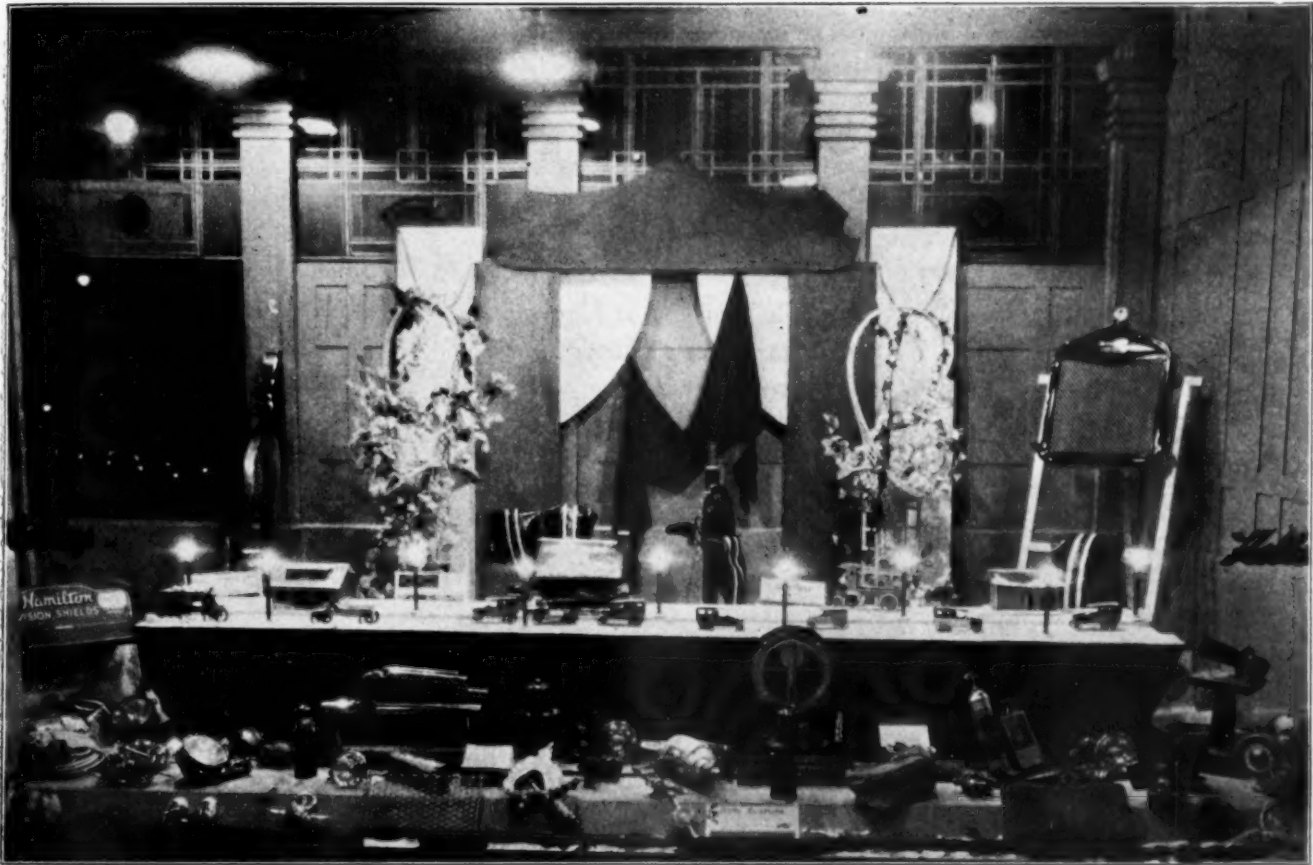
For the merchant who carries a line of automobile accessories, the window produced on this page and designed by M. E. Klasky of the Kelley-Duluth Company of Duluth, Minnesota, should be carefully studied.

During the entire week there was a crowd around the window all the time.

"The color scheme was green and white, using green plush and green and white flowers. We had a miniature street and sidewalk covered with salt to represent snow, miniature houses and buildings and bill

### Enlist Photographer's Aid in Window Display Contest.

The old recipe for rabbit pie—first catch the rabbit—has its application in the annual window display contest conducted by AMERICAN ARTISAN AND HARDWARE RECORD. First design and set up the window.



Auto Accessories Window Trim Designed by M. E. Klasky for the Kelley-Duluth Company, Duluth, Minnesota.

This window *sold* the goods, which is what windows and window trims are for. There is a wealth of detail presented, and an assortment of articles ranging from a radiator to a spark plug.

The rear panels and walls give this window an effective background, but for description, Mr. Klasky tells it impressively in his own words:

"This window was put on during auto show week. The sales results were more than gratifying.

boards advertising automobile accessories, Philadelphia batteries and Miller and Kelly-Springfield tires.

"We also placed small miniature cars, representing Yellow and Black and White taxicabs in the window, together with two miniature auto trucks, with the names of two prominent contractors painted on their sides.

"The miniature street lamps burned day and night. Auto accessories were placed in front and rear of the display."

But that is not all by any means. The next thing is to photograph the window. A good window ought to be photographed and preserved for many reasons aside from this contest. It ought to be preserved for study and comparison and for improvement in later windows.

Hence, the next step, in photographing the window, is to enlist the photographer's aid, for a poorly photographed window can spoil the best window trim. Select your local photographer and appeal to his pro-



fessional pride to turn out the best of his ability. If you deem it advisable to photograph your good window displays regularly, let him know that there is to be future business if he can turn out a good job. In any event let him know that you desire a photograph which is to be entered in a window display contest, and that a half-tone engraving is to be made from the photograph.

If your photographer is experienced in time exposures—as, of course, he is—he will instruct you whether daylight can be used. It is more probable, however, a night exposure will be required, and this may necessitate some change in your window lighting. And then again, it may not.

But the thing to do is to get in touch with your photographer *at once*.

The other rules of the contest, which is now on and will continue until April 1, 1923, are easy to follow:

The display may be made up of goods from any of the following lines: general hardware, machinists' supplies, builders' hardware, automobile supplies, sporting goods, fishing tackle, house furnishings and paints, cutlery, dairy supplies, stoves, ranges, warm air heaters, sheet metal or kindred lines.

The photograph, together with description of how the window display was arranged and the materials used, may be sent by mail or express, charges prepaid, and must reach this office *not later than April 1, 1923*.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be placed within a sealed envelope containing the real name and address of the contestant, this sealed envelope to be enclosed with the photograph.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted in the contest.

Four prizes, totaling \$100, are to be awarded for the entries adjudged the most meritorious. These are: first prize, \$50; second prize, \$25;

third prize, \$15, and fourth prize, \$10.

### ***Oliver Company Merges with Morris & Bailey Company.***

The Oliver Iron and Steel Company, manufacturers of carriage bolts, machine bolts, nuts and washers, rivets, track bolts, pole line material, light forgings, etc., and the Morris & Bailey Steel Company, of Pittsburgh, manufacturers of cold rolled strips, sheets and plates, have been merged to form the Oliver Iron and Steel Corporation.

The management and products of the two companies in the merger will continue as in the past, the Morris & Bailey Steel Company being known as the Morris & Bailey Division, Oliver Iron and Steel Corporation.

### ***Wants to Know Who Handles "Climax" Cheese Grinder.***

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Can you tell me who handles the "Climax" cheese grinder, and what the price of it is?

Yours truly,

A. LUCCHETTI.

—, Pennsylvania, January 6, 1923.

### ***Find Bronze Hardware Well Liked in West***

Bronze hardware is growing rapidly in popularity in the West, as a representative of the Copper and Brass Research Association ascertained in a recent survey of the situation, according to a recent bulletin and its alloys, brass and bronze, are cheaper after all, because you pay for them only ONCE.

At least 40 per cent of the western hardware stores have separate sheet metal departments, and perhaps 75 per cent of the hardware stores in the small towns do this class of work.

All through the West dissatisfaction with short-lived substitutes for copper is growing, and the public is

quick to grasp the fact that because of its long, uniform service, copper of the Association. Poor plating over steel has been a recent contributing cause, but experience with all kinds of "imitation" hardware and its proclivity for exuding an ugly wash of rust over the surrounding woodwork has paved the way for a successful selling effort based on the rust-proof qualities of bronze and brass.

Incidentally, it is interesting to remember that bronze is the name by which people in the West ask for the better grade of building hardware. The manager of the building hardware department of one of the largest hardware companies in the Southwest, for instance, seemed to consider brass hardware as something new and different. He was a strong advocate of bronze. The fact is that the public calls it bronze, no matter if it is brass with any of its numerous attractive finishes or whether it actually is bronze.

### **Coming Conventions**

Western Implement and Hardware Association, Kansas City, Missouri, January 16, 17, 18 and 19, 1923. Exhibition in Convention Hall. H. J. Hodge, Secretary, Abilene, Kansas.

American Society of Heating and Ventilating Engineers, Washington, D. C., January 23, 1923. C. W. Obert, Secretary, 29 West 39th Street, New York City.

Texas Hardware and Implement Association, Dallas, Texas, January 23, 24 and 25, 1923. A. M. Cox, Secretary, 822 Dallas County Bank Building, Dallas, Texas.

Mountain States Hardware and Implement Association, Denver, Colorado, January 23, 24 and 25, 1923. W. W. McCallister, Secretary-Treasurer, Boulder, Colorado.

Kentucky Hardware and Implement Association and Exhibition, Jefferson County Armory, Louisville, Kentucky, January 23, 24, 25 and 26, 1923. J. M. Stone, Secretary, 202 Republic Building, Louisville, Kentucky.

West Virginia Hardware Association Convention and Exhibition, Huntington, West Virginia, January 30 and 31, and February 1, 1923. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, January 16, 17, 18 and 19, 1923. H. O. Roberts, Secretary, 1120 Metropolitan Life Building, Minneapolis, Minnesota.

Idaho Retail Hardware and Implement Dealers' Association, Boise, Idaho, January 31, February 1 and 2, 1923. E.



E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Indiana Retail Hardware Association Convention and Exhibition, Indianapolis, Indiana, January 30 and February 1 and 2, 1923. G. F. Sheely, Secretary, Argos, Indiana.

Oklahoma Hardware and Implement Association, The Auditorium, Oklahoma City, Oklahoma, January 31, February 1, 1923. W. A. Clark, Secretary-Treasurer, 209½ West Main Street, Oklahoma City, Oklahoma.

Nebraska Retail Hardware Association, Convention and Exhibition, February 6 to 9, 1923, Omaha, George H. Dietz, Secretary-Treasurer, 414 Little Building, Lincoln, Nebraska.

Michigan Retail Hardware Convention and Exhibition, Grand Rapids, February 6, 7, 8 and 9, 1923. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids. A. J. Scott, Secretary, Marine City, Michigan.

Virginia Retail Hardware Association, Norfolk, Virginia, February 7, 8 and 9, 1923. Thomas B. Howell, Secretary, Richmond, Virginia.

Wisconsin Retail Hardware Association, Milwaukee Auditorium, Milwaukee, Wisconsin, February 7, 8 and 9, 1923. P. J. Jacobs, Secretary, Stevens Point, Wisconsin. George W. Kornely, Manager of Exhibits, 1476 Green Bay Avenue, Milwaukee, Wisconsin.

Pennsylvania and Atlantic Seaboard Hardware Association Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, Pennsylvania, February 12, 13, 14, 15 and 16, 1923. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh, Pennsylvania.

Ohio Hardware Association Convention and Exhibition, Cleveland, Ohio, February 13, 14, 15 and 16, 1923. Exhibition in the new Municipal Hall. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Illinois Retail Hardware Association Convention and Exhibition, Hotel Sherman, Chicago, Illinois, February 13, 14 and 15, 1923. L. D. Nish, Secretary-Treasurer, Elgin, Illinois.

Iowa Retail Hardware Association Convention and Exhibition, Des Moines, Iowa, February 13, 14, 15 and 16, 1923. A. R. Sale, Secretary, Mason City, Iowa.

North Dakota Retail Hardware Association, Grand Forks, North Dakota, February 14, 15 and 16, 1923. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Missouri Retail Hardware Association Convention and Exhibition, Marquette Hotel, St. Louis, Missouri, February 20, 21 and 22, 1923. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis, Missouri.

Minnesota Retail Hardware Association, Duluth, Minnesota, February 20, 21, 22 and 23, 1923. H. O. Roberts, Secretary, 1120 Metropolitan Life Building, Minneapolis, Minnesota.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 21, 22 and 23, 1923. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

New York State Retail Hardware Association Convention and Exposition, Rochester, New York, February 20, 21, 22 and 23, 1923. Headquarters, Powers Hotel. Sessions and Exposition at Exposition Park. John B. Foley, Secretary, City Bank Building, Syracuse, New York.

Indiana Sheet Metal Contractors' Association, Terre Haute, Indiana, Febru-

ary 21 and 22, 1923. Leslie Beach, Secretary, Richmond, Indiana.

Wisconsin Sheet Metal Contractors' Association, Republican House, Milwaukee, Wisconsin, March 14 and 15, 1923. Milwaukee, Wisconsin.

Michigan Sheet Metal and Roofing Contractors' Association, Bay City, February 26, 27, 28 and March 1, 1923. Frank E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Iowa Sheet Metal Contractors' Association, Sioux City, Iowa, March 14, 15, 1923. R. E. Pauley, Secretary, Mason City, Iowa.

Illinois Sheet Metal Contractors' Association, Decatur, Illinois, April 4, 1923. Fred Gross, Secretary, Quincy, Illinois.

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, April 18 and 19, 1923. Allen W. Williams, Secretary, 52 West Gay Street, Columbus, Ohio.

American Hardware Manufacturers' Association, Spring Convention, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. Frederick D. Mitchell, Secretary - Treasurer, 1819 Broadway, New York City.

Southern Hardware Jobbers' Association, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. John Donnan, Secretary-Treasurer, Richmond, Virginia.

Old Guard Southern Hardware Salesmen's Association, Windsor Hotel, Jacksonville, Florida, April 25, 1923. R. P. Boyd, Secretary-Treasurer, R. F. D. 4, Knoxville, Tennessee.

Hardware Association of the Carolinas, Columbia, South Carolina, May 8, 9, 10 and 11, 1923. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, Arkansas, May, 1923. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock, Arkansas.

Southeastern Retail Hardware and Implement Association, covering Tennessee, Alabama, Georgia and Florida. Auditorium Armory, Atlanta, Georgia, May 15, 16, 17 and 18, 1923. Walter Harlan, Secretary-Treasurer, 701 Grand Theater Building, Atlanta, Georgia.

National Retail Hardware Association, Richmond, Virginia, June, 1923. Herbert P. Sheets, Secretary-Treasurer, Argos, Indiana.

The National Association of Sheet Metal Contractors, St. Louis, Missouri, June 25 to 29, 1923. E. B. Langenberg, Secretary, 4057 Forest Park Boulevard, St. Louis, Missouri; E. L. Seabrook, 608 Chestnut Street, Philadelphia, Secretary.

Missouri Sheet Metal Contractors' Association, Statler Hotel, St. Louis, Missouri, June 25, 1923. Otto E. Scheske, Secretary, 3818 Maffitt Avenue, St. Louis, Missouri.

## Retail Hardware Doings

### Florida.

The Lakeland Hardware Company is the name of the hardware store of Ben Wilson at Lakeland.

### Illinois.

The hardware store of Bishop and Myers at Washington has been pur-

chased by Miller and Company of Chicago.

E. G. Kriege, proprietor of a hardware store in Edwardsville for the past three years, has formed a partnership with his brother, A. G. Kriege of Fort Wayne, Indiana.

Hamilton Monroe Manufacturing Company, 30 Commonwealth Avenue, North Chicago, has been incorporated with a capital of \$20,000 to manufacture and deal in hardware specialties. Incorporators are: Joseph H. Hamilton, Dale Leon Monroe, and William A. Witt.

### Iowa.

Walker Hart, who has been in the hardware business in Stanwood for the past thirteen years, has retired. His brother, H. J. Hart, and his son, Martin, will conduct the business in the future.

At Kingsley, E. H. Derby and George Haggins have opened a new hardware store.

Hansen-Kaun Hardware Company, Le Mars, has been incorporated with a capital of \$15,000. Incorporators are: Paul Kaun, president; W. W. Edwards, vice-president, and S. Hansen, secretary and treasurer.

### Kansas.

Cliff and Cole Hardware store at Altona has dissolved partnership. A. K. Cliff will continue the business.

At St. Benedict, Erdman and Son Hardware and Implement store has been destroyed by fire.

A deal has been completed whereby S. E. Bear and Dave Bear have become the owners of the Rouse and Goodson Hardware store at Kinsley.

Rex Allaman, formerly of Atchison, has reopened the Reichers Hardware store at Horton.

### Michigan.

R. M. Lintz and T. W. Watson have opened a hardware store at 1720 South Saginaw Street, Flint.

### Minnesota.

Ed Nelson has purchased an interest in the hardware store of John A. Johnson at Preston.

Matejack Brothers of Mankato have moved their hardware business into the Frieberg Building.

### Missouri.

H. L. Smarr and J. C. Hopkins have purchased the interests of John and Joseph O'Brien in the Platte-Clinton Hardware Company at Plattsburg.

### Nebraska.

William Garnett has purchased the Orcutt hardware stock at Litchfield.

Strahan and Son have purchased the Stringfellow hardware business at Madison.

### North Dakota.

J. S. Lombard Hardware store at Sanish has been sold to August Meyers and A. T. Moen.

### Oklahoma.

The Land Hardware Company of Sharon has been destroyed by fire.

### South Dakota.

Garland Ellis has disposed of his hardware stock at Colton to Car Grove of Chester.

### Wisconsin.

The hardware firm of Core and Wells, in business at Highland for twelve years, has been exchanged for a farm in the vicinity of New Lisbon. Joseph Bosh is the new proprietor.

# Study and Interpretation of Advertisements.

You Can Make Your Advertisements More Gainful by Avoiding the Faults and Profiting by the Good Qualities of Others.

The Cunningham Hardware Company of Mobile, Alabama, carry a large line of general hardware, including an ample stock of stoves, both for cooking and heating, and their ad shown on this page as reproduced from the Morris, Alabama, *Register*, shows how they



**Stoves!**

for heating and cooking

We carry a complete line embracing all kinds of Stoves and have them at an equally wide price range. Get in touch with us for your stove wants.

POKERS - SHOVELS - SCUTTLES

**Nails! Wire!**

We have on hand ample stocks of nails, smooth and barbed wire, wire fencing and poultry netting. Let us supply you while stocks are plentiful. Place your orders now. Call see us, wire, phone or write.

**Cunningham Hdwe. Co.**  
Bell Phones 2648 and 146 Home Phone 128  
Commerce and Dauphin Streets, Mobile, Ala.

reach out for business in adjacent territory.

The well known Garland line of stoves and ranges is given the preferred position, and announcement is made that "We carry a complete line embracing all kinds of stoves at equally wide price range. Get in touch with us for your stove wants."

The remainder of the ad is devoted to nails and wire, reading as follows: "We have on hand ample stocks of nails, smooth and barbed wire, wire fencing and poultry netting. Let us supply you while stocks are plentiful. Place your orders

now. Call, see us, wire, phone or write."

\* \* \*

Hardware merchants who carry a line of arms and ammunition will find some profitable suggestions in the ad of the Wilson Hardware Company of Lakeland, Florida, which appeared in the *Star* of that city and is shown on this page.

"Hunting Time Is Here" is the theme of this selling appeal, and the illustration of the hunter and dogs in the field is calculated to stir the familiar feeling which every hunter and sportsman has at a certain

period of the year.

"You want the best shells, powder and cartridges, don't you?" asks this advertising salesman. "That's why you want to come here for them. We are especially well fitted to equip hunters. We handle the best quality of loaded shells, semi-smokeless powder and revolver cartridges. Good ammunition gives a hunter that confidence which enables him to bring home a good bag of game. Not only for that reason do you want to buy your supplies here, but also because we can save you money."



## HUNTING TIME IS HERE

You want the best shells, powder and cartridges, don't you? That's why you want to come here for them. We are especially well fitted to equip hunters.

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Good ammunition gives a hunter that confidence which enables him to bring home a good bag of game. Not only for that reason do you want to buy your supplies here, but also because we can save you money.

# Wilson Hardware Co



# Review of Conditions in the Metal Markets.

## General Situation in the Steel Industry. Report of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

### *Non-Ferrous Metals*

#### *Continue Quiet and Firm.*

With Germany as our best foreign copper customer, the occupation of the Ruhr by the French was the outstanding development of the week in the non-ferrous metals market. Though the pound sterling held firm at around \$4.64 to \$4.65, continental exchanges dropped sharply. With the first break in marks, German purchases of copper were made in volume, and later, with the break in francs, French buying of copper was heavy.

These purchases were for financial, not military, reasons. The London metal market for copper, tin and zinc, showed some easiness, which was reflected in tin and zinc prices in this country.

Electrolytic copper remained steady at \$14.75 for spot and futures. Tin was firm at \$38.62½ to \$38.75. Lead was firm at 7.40 to 7.60 cents, while zinc was quiet, East St. Louis spot and nearby deliveries, at 7.00 to 7.10 cents.

#### *Copper.*

There has been some tendency to look for a reaction in copper prices, due to the fact that Germany is our best foreign customer, with the result that some custom smelters have been willing to take on tonnage for first quarter delivery at 14.62½ cents delivered and second quarter at 14.75 cents.

Leading producers have been asking 14.75 cents to 14.87½ cents, delivered. China has been buying both electrolytic and casting copper, for the first time in some months.

Domestic buying of casting copper and composition ingot has been at a high rate. Sales of casting are being made at 14.25 cents, refinery.

#### *Zinc.*

The zinc market has reacted slightly, from 7.05 cents to 7 cents East St. Louis, following a decline

of £1 in the London zinc market. Domestic buying has been light, especially by the galvanizers. High grade zinc has held at 8 cents to 8.25 cents, delivered. Zinc pigments were advanced ½ cent recently, to 7.50 cents for lead-free zinc oxide, in bags, carlots.

January is quotable nominally today at 7 cents East St. Louis, but February, March and April can be bought at an average of 6.85 cents. This discounting of futures must be viewed as resulting from expectation of increasing production.

#### *Lead.*

The lead market has experienced a sharp advance, due to curtailed production, with continued brisk consumption. The outside market has advanced to 7.25 cents to 7.35 cents East St. Louis and 7.55 cents to 7.65 cents New York, for January shipment. Some of the leading independents are out of the market, sold up for the next several weeks.

The amount of inquiry reported this week is not heavy. Some large producers were forced into the open market last week for prompt supplies, but seem to have covered their emergency needs.

#### *Solder.*

Chicago warehouses quoted solder prices as follows: Warranted, 50-50, per 100 pounds, \$26.00; commercial, 45-55; per 100 pounds, \$24.50; and plumbers', per 100 pounds, \$23.25.

#### *Tin.*

Tin prices have receded about one-half cent in an inactive market, selling from 39.00 cents down to 38.50 cents for Straits the past week, while London declined slightly over £3. There has been a surfeit of Chinese tin here, due to the heavy stocks formerly existing in China being transferred to this country. The Chinese market, however, is now strong. No. 1 Chinese

has been quoted about 37.00 cents for prompt delivery and 37.25 cents for futures.

Business in tin in the New York market is at more or less of a standstill, which is not altogether unnatural because consumers see nothing in the foreign situation on which prices can be advanced at present, and are not interested in buying except against special requirements for prompt and nearby deliveries, for which there are few inquiries on the market.

The dealers, on the other hand, find no trading possibilities in the present conditions with no bargains apparently obtainable on resales, and are not disposed to cut prices to attract trade because of the way in which the London market is holding.

#### *Nails and Wire.*

Although the production of wire and nails has been increased somewhat in the Chicago district, about 70 per cent of capacity being engaged, it is not yet sufficient to meet demands and sellers are allowing purchasers to contract only part of their requirements. Light fencing and poultry netting are in strong demand, and some buying of barbed wire is being done. While the leading producer has not changed its quotations from 2.45 cents, Pittsburgh, for wire and 2.70 cents, Pittsburgh, for nails, practically all independents now are asking \$2 per ton higher than these figures.

Wire products in the Pittsburgh territory are finding a ready sale and various plants are filled up for at least two or three months. One or two makers have so much plain wire business they have had to refuse various offers of tonnage and this past week this attitude extended to nails in one or two instances. Present market levels are \$2 higher than the ruling figures on business already booked, practically all inde-



pendent producers having followed the increase inaugurated late in December by the Pittsburgh Steel Co., making plain wire 2.55 cents and wire nails 2.80 cents, base Pittsburgh.

### ***Tin Plate.***

A continuance of heavy demand for steel plates for railroad cars and tank work marks the beginning of the new year and promises to give Chicago mills more tonnage than they can accept. Placing of 3,200 freight cars last week and inquiries for more than 6,000 others add to the heavy tonnage required by car builders.

Chicago builders of tanks are now asking bids on 9,000 tons of plates and shapes for tanks for the Union Oil Co. of California and 3,500 tons for tanks for the Shell Oil Co. The Sinclair Oil Co. has been taking bids on 30 tanks for Oklahoma, which will require 7,100 tons of plates. Plates are now quoted at a spread of 2.20 cents to 2.30 cents, Chicago. The former minimum of 2.10 cents has disappeared.

### ***Furnace Fittings.***

Discounts by furnace manufacturers for furnace fittings have been raised from 40-10 per cent to 50 per cent, effective January 2, according to manufacturers' new discount sheets.

### ***Many Hardware Articles Advance in Prices.***

Manufacturers announce advances from five to ten per cent on many hardware articles, particularly plumbs and levels, picks, scissors, trimmers and shears and bright wire goods, including hooks, eyes, screw eyes and hooks. Twist drills are advanced from 20 to 33 $\frac{1}{3}$  per cent.

### ***Sheets.***

Consumers of steel sheets at Chicago, who are not receiving sufficient material from mills in this district, find the only possibility of adding to their supply is from eastern mills. The latter have been selling freely during recent weeks and it is difficult now to place business even there.

An advance of \$3 per ton has been made by some eastern producers, bringing the market to 2.65 cents for blue annealed, 3.50 cents for black and 4.50 cents, Pittsburgh, for galvanized.

Users in the Chicago district are pressing mills for deliveries.

### ***Old Metals.***

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows:

Old steel axles, \$18.00 to \$18.50; old iron axles, \$24.00 to \$24.50; steel springs, \$20.50 to \$21.00; No. 1 wrought iron, \$16.50 to \$17.00; No. 1 cast, \$18.50 to \$19.00, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 $\frac{1}{2}$  cents; light brass, 5 $\frac{1}{2}$  cents; lead, 5 cents; zinc 4 cents; and cast aluminum, 15 cents. The demand for nearly all lines is heavy.

## ***Iron and Steel Prices Stiffen as Maker's Contract Offerings and Inquiries Continue.***

### ***Mill Activities Increasing Since First of Year—Chicago Pig Iron in Good Demand at \$29.***

**A**FTER a period of deflation following the dual strikes, the iron and steel market is showing great strength and some price advances have been recorded.

This condition, together with the promise of an indefinite period of higher costs of production, has caused a contraction of the tonnage offered and a stiffening of prices in practically all lines. Mill activities since the first of the year have gone ahead slightly and now are around 85 per cent on the average, which is considered as approximately the maximum under present limitations.

New buying of steel, which was unusually active during the holiday season, has continued on a large scale in the first week of the new year. Buyers apparently are more impressed by the threat of prolonged and uncertain deliveries of future material and are giving less consideration to prices. The mills are much more independent in terminating old protections.

Leading producers now have definitely fixed upon two cents Pittsburgh as their minimum quotation for plates, shapes and bars.

In the Chicago district inquiry for pig iron continues in steady volume, mostly for small lots, although there are some for 1,000 tons. Demand is largely for spot iron. The majority of users covered with requirements during the recent heavy

buying, although many contracted only in part for the first quarter. Some are feeling out the market for the second quarter and occasional sales are made, although the total tonnage for that delivery is small. The market is \$29, with some spot sales at 50 cents higher.

The market for charcoal iron is quiet and prices are unchanged. Sales of silveries are confined largely to single carloads. Two steel-makers are inquiring for 300 tons of 10 per cent bessemer ferrosilicon. Low phosphorus iron is quoted \$36 to \$37, Chicago.

The southern market is \$24 to \$25, Birmingham. Delivery from that source is improving. One southern maker is quoting a price on iron to be delivered by water route equivalent to \$21, Birmingham, available at Illinois consuming points.

Prospects for 1923 are exceptionally bright according to leading members of the trade here. Bookings are heavy, and prices are far more satisfactory. Although railroads have placed large car orders for cars the buying movement was not started until late in the year and they are expected to place a large number more. Some important steel men say the carriers have just commenced to buy cars and that they will place large numbers during the first part of 1923.